

## VP9 Patent List

updated as of June 18, 2025

Sisvel has the right to grant non-exclusive licenses under the VP9 patents owned or controlled by some of the world's leading technology companies: Dolby Electronics, Electronics and Telecommunications Research Institute (ETRI), Dolby Video Compression LLC (formerly GE Video Compression, LLC), Godo Kaisha IP Bridge 1, IDEA HUB Inc., JVCKENWOOD Corporation, Korea Advanced Institute of Science and Technology (KAIST), Korean Broadcasting System (KBS), Koninklijke Philips N.V., Nippon Telegraph and Telephone Corporation (NTT), NTT Docomo Inc., Orange S.A., Sejong University, Sk Planet Co. Ltd., SK Telecom Co. Ltd., Toshiba Corporation (previously Toshiba IPR Solutions) and Xylene Holdings S.A. (patents held by Xylene Holding include patents previously held by Mitsubishi Electric Corporation). The Patent Owners have appointed independent accredited third parties to evaluate the patents and confirm their use when implementing VP9 technology. The third party evaluation process is still ongoing and to date there are 862 patents listed, including third-party evaluated patents and their related family members. This list will be updated on a regular basis and supplemented to include new evaluations as soon as available.

| Company                                                           | VP9 Family |                    | Pat.Nr      | Claim | Illustrative section(s) of the VP9 specification                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------|------------|--------------------|-------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB                                            | VP9-004    | Exemplary Patent/s | US10297008  | 1     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                                                                                       |
|                                                                   | VP9-008    | Exemplary Patent/s | USRE46924E  | 1     | 1, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 3, 5.13, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14                                                                                                                                                      |
|                                                                   |            | Family members     | US8401080   |       |                                                                                                                                                                                                                                                                                                                               |
|                                                                   | VP9-010    | Exemplary Patent/s | CN107094252 | 2     | 1, 2, 5.6, 6.1, 6.2.6, 6.2.13, 6.4, 6.4.2, 6.4.3, 7.2.11, 8.6, 8.6.1, 8.7, 9.2                                                                                                                                                                                                                                                |
|                                                                   |            |                    | KR101851477 | 1     | 2.3, 2.17, 2.47, 2.57, 2.59, 2.60, 5.14, 6.1, 6.2, 6.2.13, 6.4, 6.4.2, 6.4.3, 7.2.11, 9.2                                                                                                                                                                                                                                     |
|                                                                   |            |                    | KR102003549 | 1     | 2.3, 2.5, 2.10, 2.16, 2.17, 2.47, 2.57, 2.58, 2.60, 4.7, 5.1, 5.6, 5.14, 5.26, 6.1, 6.2.13, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.21, 7.2.11, 7.4.15, 8, 8.1, 8.5, B.1, B.4                                                                                                                                    |
|                                                                   |            |                    | RU2613740   | 2     | 1, 2.3, 2.5, 2.10, 2.17, 2.22, 2.40, 2.56, 2.57, 2.60, 4.9, 4.9.3, 4.9.4, 4.9.5, 6.1, 6.2, 6.2.6, 6.2.13, 6.2.14, 6.4, 6.4.2, 6.4.3, 7.1, 7.2.11, 7.4.1, 7.4.3, 9.2                                                                                                                                                           |
|                                                                   |            |                    | US10362311  | 1     | 2.3, 2.5, 2.10, 2.16, 2.17, 2.47, 2.57, 2.58, 2.60, 4.7, 5.1, 5.6, 5.14, 5.26, 6.1, 6.2.13, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.21, 7.2.11, 7.4.15, 8.1, 8.5, B.1, B.4                                                                                                                                       |
|                                                                   |            |                    | US9319694   | 1     | 1, 2.3, 2.5, 2.10, 2.17, 2.22, 2.40, 2.56, 2.57, 2.60, 4.9, 4.9.3, 4.9.4, 4.9.5, 6.1, 6.2, 6.2.6, 6.2.13, 6.2.14, 6.4, 6.4.2, 6.4.3, 7.1, 7.2.11, 7.4.1, 7.4.3, 9.2                                                                                                                                                           |
|                                                                   |            |                    | US9661335   | 1     | 2.3, 2.5, 2.10, 2.16, 2.17, 2.47, 2.57, 2.58, 2.60, 4.7, 5.1, 5.6, 5.14, 5.26, 6.1, 6.2.13, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.21, 7.2.11, 7.4.15, 8, 8.1, 8.5, B.1, B.4                                                                                                                                    |
|                                                                   |            | Family members     | KR101708982 |       |                                                                                                                                                                                                                                                                                                                               |
|                                                                   |            |                    | US9380308   |       |                                                                                                                                                                                                                                                                                                                               |
|                                                                   |            |                    | US9654783   |       |                                                                                                                                                                                                                                                                                                                               |
|                                                                   | VP9-011    | Exemplary Patent/s | US7894530   | 6     | 2.3, 2.5, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.52, 2.53, 2.57, 2.59, 2.61, 2.62, 6.1, 6.2, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.11, 6.4.13, 6.4.21, 7.2, 7.4.3, 7.4.4, 7.4.8, 7.4.9, 8.5, 8.5.2, 8.6, 8.6.2, 8.7, 8.7.2, 10.2                                                                           |
| Dolby Video Compression, LLC (formerly GE Video Compression, LLC) | VP9-030    | Exemplary Patent/s | CN108471534 | 1     | 1, 2.9, 2.16, 2.17, 2.36, 2.61, 2.62, 4.9, 4.9.5, 6.4.24, 6.4.25, 6.4.26, 7.4.15, 7.4.16, 8, 8.1, 9.2, 9.2.2, 9.3, 9.3.1, 9.3.2, 10.1                                                                                                                                                                                         |
|                                                                   |            |                    | CN108471537 | 1     | 2, 2.3, 2.16, 2.17, 2.59, 2.61, 2.62, 4.9, 4.9.5, 5, 5.4, 6, 6.4.24, 6.4.25, 6.4.26, 7, 7.1.2, 7.4.16, 7.4.17, 8.5.1, 9, 9.2, 9.3, 9.3.2, 10.1                                                                                                                                                                                |
|                                                                   |            |                    | HK1260159   | 1     | 1, 2.9, 2.16, 2.17, 2.36, 2.61, 2.62, 4.9, 4.9.5, 6.4.24, 6.4.25, 6.4.26, 7.4.15, 7.4.16, 8, 8.1, 9.2, 9.2.2, 9.3, 9.3.1, 9.3.2, 10.1                                                                                                                                                                                         |
|                                                                   |            |                    | HK1260162   | 1     | 2, 2.3, 2.16, 2.17, 2.59, 2.61, 2.62, 4.9, 4.9.5, 5, 5.4, 6, 6.4.24, 6.4.25, 6.4.26, 7, 7.1.2, 7.4.16, 7.4.17, 8.5.1, 9, 9.2, 9.3, 9.3.2, 10.1                                                                                                                                                                                |
|                                                                   |            |                    | JP6700341   | 1     | 2, 2.3, 2.16, 2.17, 2.59, 2.61, 2.62, 4.9, 4.9.5, 5, 5.4, 6, 6.4.24, 6.4.25, 6.4.26, 7, 7.1.2, 7.4.16, 7.4.17, 8.5.1, 9, 9.2, 9.3, 9.3.2, 10.1                                                                                                                                                                                |
|                                                                   |            |                    | JP6700342   | 1     | 2, 4.9, 4.9.5, 5.4, 6.4.4, 6.4.21, 6.4.24, 6.4.25, 7.4.8, 7.4.9, 7.4.16, 8.1, 8.6, 8.6.2, 8.7, 9.3, 9.3.2, 10.1                                                                                                                                                                                                               |
|                                                                   |            |                    | KR102023565 | 1     | 2.3, 2.16, 2.17, 2.22, 2.23, 2.51, 2.59, 2.60, 2.61, 2.62, 3, 4.9.1, 4.9.3, 4.9.5, 5.1, 5.4, 5.7, 5.21, 5.25, 6, 6.1, 6.1.2, 6.3, 6.3.7, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 6.4.25, 6.4.26, 7.1.2, 7.2, 7.3, 7.3.5, 7.4.16, 7.4.17, 8.4, 8.4.1, 8.4.2, 8.4.3, 9.2, 9.2.1, 9.2.2, 9.2.3, 9.3, 9.3.1, 9.3.2, 9.3.3, 10.5 |

|                                                  |         |                    |                |   |                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------|---------|--------------------|----------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby Video Compression, LLC (formerly GE Video) | VP9-030 | Exemplary Patent/s | KR102023566    | 1 | 1, 2.9, 2.16, 2.17, 2.36, 2.61, 2.62, 4.9, 4.9.5, 6.4.24, 6.4.25, 6.4.26, 7.4.15, 7.4.16, 8, 8.1, 9.2, 9.2.2, 9.3, 9.3.1, 9.3.2, 10.1                                                                                                                                                                                         |
|                                                  |         |                    | TWI711302      | 1 | 2.3, 2.16, 2.17, 2.22, 2.23, 2.51, 2.59, 2.60, 2.61, 2.62, 3, 4.9.1, 4.9.3, 4.9.5, 5.1, 5.4, 5.7, 5.21, 5.25, 6, 6.1, 6.1.2, 6.3, 6.3.7, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 6.4.25, 6.4.26, 7.1.2, 7.2, 7.3, 7.3.5, 7.4.16, 7.4.17, 8.4, 8.4.1, 8.4.2, 8.4.3, 9.2, 9.2.1, 9.2.2, 9.2.3, 9.3, 9.3.1, 9.3.2, 9.3.3, 10.5 |
|                                                  |         |                    | TWI787604      | 1 | 1, 2.9, 2.16, 2.17, 2.36, 2.61, 2.62, 4.9, 4.9.5, 6.4.24, 6.4.25, 6.4.26, 7.4.15, 7.4.16, 8, 8.1, 9.2, 9.2.2, 9.3, 9.3.1, 9.3.2, 10.1                                                                                                                                                                                         |
|                                                  |         |                    | US10129549     | 1 | 2.3, 2.16, 2.17, 2.22, 2.23, 2.51, 2.59, 2.60, 2.61, 2.62, 3, 4.9.1, 4.9.3, 4.9.5, 5.1, 5.4, 5.7, 5.21, 5.25, 6, 6.1, 6.1.2, 6.3, 6.3.7, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 6.4.25, 6.4.26, 7.1.2, 7.2, 7.3, 7.3.5, 7.4.16, 7.4.17, 8.4, 8.4.1, 8.4.2, 8.4.3, 9.2, 9.2.1, 9.2.2, 9.2.3, 9.3, 9.3.1, 9.3.2, 9.3.3, 10.5 |
|                                                  |         |                    | US10148968     | 1 | 1, 2.9, 2.16, 2.17, 2.36, 2.61, 2.62, 4.9, 4.9.5, 6.4.24, 6.4.25, 6.4.26, 7.4.15, 7.4.16, 8, 8.1, 9.2, 9.2.2, 9.3, 9.3.1, 9.3.2, 10.1                                                                                                                                                                                         |
|                                                  |         |                    | US10477223     | 1 | 1, 2.9, 2.16, 2.17, 2.36, 2.61, 2.62, 4.9, 4.9.5, 6.4.24, 6.4.25, 6.4.26, 7.4.15, 7.4.16, 8, 8.1, 9.2, 9.2.2, 9.3, 9.3.1, 9.3.2, 10.1                                                                                                                                                                                         |
|                                                  |         |                    | US10587884     | 1 | 2.3, 2.16, 2.17, 2.22, 2.23, 2.51, 2.59, 2.60, 2.61, 2.62, 3, 4.9.1, 4.9.3, 4.9.5, 5.1, 5.4, 5.7, 5.21, 5.25, 6, 6.1, 6.1.2, 6.3, 6.3.7, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 6.4.25, 6.4.26, 7.1.2, 7.2, 7.3, 7.3.5, 7.4.16, 7.4.17, 8.4, 8.4.1, 8.4.2, 8.4.3, 9.2, 9.2.1, 9.2.2, 9.2.3, 9.3, 9.3.1, 9.3.2, 9.3.3, 10.5 |
|                                                  |         | Family members     | BR122020004415 |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | CN108471538    |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | CN108777793    |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | KR101605163    |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | KR101951413    |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | KR102079664    |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | US10123025     |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  |         |                    | US10750191     |   |                                                                                                                                                                                                                                                                                                                               |
|                                                  | VP9-031 | Exemplary Patent/s | JP6909818      | 1 | 2, 5.13, 6.1, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.5.14, 7.4.11, 7.4.15, 8.1, 8.5.2, 8.6.2                                                                                                                                                                                              |
|                                                  |         |                    | KR102145722    | 1 | 2.3, 2.16, 2.17, 2.22, 2.48, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                           |
|                                                  |         |                    | TWI713356      | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 2.57, 4.7, 5.13, 5.19, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.5.2, 8.5.2.1                                                                                                                                   |
|                                                  |         |                    | US10248966     | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 2.57, 4.7, 5.13, 5.19, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.5.2, 8.5.2.1                                                                                                                                   |
|                                                  |         |                    | US10460344     | 1 | 1, 2.3, 2.10, 2.15-2.17, 2.22, 2.25-2.27, 2.39, 2.41-2.43, 2.52, 2.53, 2.55, 2.59, 3, 5.5, 5.6, 5.13, 5.14, 6.1, 6.2, 6.2.11, 6.2.13, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.21, 6.4.24, 6.5, 6.5.1, 6.5.6, 6.5.12, 7.1, 7.2.11, 7.4.1, 7.4.3, 7.4.4, 7.4.11-7.4.13, 8.1, 8.5, 8.5.2, 8.6.2                             |
|                                                  |         |                    | US10672028     | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 2.57, 4.7, 5.13, 5.19, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.5.2, 8.5.2.1                                                                                                                                   |
|                                                  | VP9-093 | Exemplary Patent/s | BR122020007668 | 1 | 2, 4.9, 4.9.5, 5.3, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6.2, 9.3.2                                                                                                                                                                                                             |
|                                                  |         |                    | CN105120287    | 1 | 2, 4.9, 4.9.5, 5.3, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6.2, 9.3.2                                                                                                                                                                                                             |
|                                                  |         |                    | CN106231329    | 1 | 2, 4.9, 4.9.5, 5.3, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6.2, 9.3.2                                                                                                                                                                                                             |
|                                                  |         |                    | CN106231330    | 1 | 2, 4.9, 4.9.5, 5.1, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6.2, 9.3.2                                                                                                                                                                                                             |
|                                                  |         |                    | CN106231334    | 1 | 2, 4.9, 4.9.5, 5.3, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6, 8.6.2, 9.3.2                                                                                                                                                                                                        |

|                                                       |         |                    |             |   |                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------|---------|--------------------|-------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby Video Compression, LLC                          | VP9-093 | Exemplary Patent/s | CN106231338 | 1 | 2, 4.9, 4.9.5, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6.2, 9.3.2                                                                                                                                                                                                                                     |
|                                                       |         |                    | TWI775719   | 1 | 2, 4.9, 4.9.5, 5.3, 5.6, 5.14, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.21, 7.4.3, 7.4.15, 8.1, 8.6.2, 9.3.2                                                                                                                                                                                                                                |
|                                                       | VP9-095 | Exemplary Patent/s | US10812811  | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.25-2.27, 2.39-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 3, 4.9, 4.9.3, 4.9.5, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.11, 6.2.13, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.19, 6.4.21, 6.4.24, 6.5, 6.5.1, 6.5.14, 7.1, 7.2.11, 7.4.1, 7.4.3, 7.4.4, 7.4.11, 7.4.12, 7.4.15, 7.4.16, 8.1, 8.5, 8.5.2, 8.6, 8.6.2 |
|                                                       |         |                    |             |   |                                                                                                                                                                                                                                                                                                                                                  |
|                                                       | VP9-096 | Exemplary Patent/s | CN103299623 | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                                    |
|                                                       |         |                    | CN106851320 | 7 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.7, 6.4.12, 6.4.24, 7.2.9, 7.2.10, 7.4.6, 7.4.15, 7.4.16, 8.5, 8.5.1, 8.5.2, 8.6.2                                                                                                                                                                                                                                   |
|                                                       |         |                    | CN107071487 | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.3, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                      |
|                                                       |         |                    | CN107071489 | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                                    |
|                                                       |         |                    | CN107071491 | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.9, 7.2.10, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                             |
|                                                       |         |                    | CN107071492 | 1 | 1, 2, 4.9, 4.9.5, 5.6, 5.15, 6.2.11, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.3, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                          |
|                                                       |         |                    | HK1242497   | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.3, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                      |
|                                                       |         |                    | HK1242880   | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.9, 7.2.10, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                             |
|                                                       |         |                    | HK1243254   | 1 | 1, 2, 4.9, 4.9.5, 5.6, 5.15, 6.2.11, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.3, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                          |
|                                                       |         |                    | HK1243255   | 1 | 1, 2, 5.6, 5.15, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.13, 6.4.21, 7.2.10, 7.4.6, 7.4.15, 8.5.2, 8.6, 8.6.2                                                                                                                                                                                                                    |
|                                                       |         |                    | JP6856554   | 1 | 2, 4.9.5, 5.15, 5.6, 6.2.11, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.10, 6.4.11, 6.4.12, 6.4.13, 6.4.14, 6.4.21, 6.4.24, 6.4.26, 7.2.9, 7.2.10, 7.4.3, 7.4.3, 7.4.6, 7.4.7, 7.4.8, 7.4.9, 7.4.15, 8.1, 8.5.2, 8.6.2                                                                                                                               |
|                                                       |         |                    | KR101527666 | 1 | 2.3, 2.16, 2.17, 2.37, 2.54, 2.56, 2.57, 2.59, 3, 6.2.11, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.21, 6.4.24, 7.2.10, 7.4.3, 7.4.7, 7.4.15, 7.4.16, 8.5.2, 8.6.2                                                                                                                                                           |
|                                                       |         |                    | KR101607426 | 2 | 2.54, 3, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 7.2.10, 7.4.7                                                                                                                                                                                                                                                                       |
|                                                       |         |                    | TWI513277   | 1 | 2.3, 2.16, 2.17, 2.37, 2.54, 2.56, 2.57, 2.59, 3, 6.2.11, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.12, 6.4.21, 6.4.24, 7.2.10, 7.4.3, 7.4.7, 7.4.15, 7.4.16, 8.5.2, 8.6.2                                                                                                                                                           |
|                                                       |         | Family members     | TWI644561   |   |                                                                                                                                                                                                                                                                                                                                                  |
|                                                       |         |                    | TWI725348   |   |                                                                                                                                                                                                                                                                                                                                                  |
| Electronics and Telecommunications Research Institute | VP9-022 | Exemplary Patent/s | KR101356448 | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |
|                                                       |         |                    | KR101412176 | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |
|                                                       |         |                    | KR101461496 | 1 | 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.4.4, 7.4.5, 7.4.15, 8.5.1                                                                                                                                                                                                                                                                                    |
|                                                       |         |                    | KR101461497 | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |
|                                                       |         |                    | KR101605852 | 2 | 5.1, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.4.4, 7.4.5, 7.4.15, 8.5.1                                                                                                                                                                                                                                                                               |
|                                                       |         |                    | US10178393  | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |
|                                                       |         |                    | US10321137  | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |
|                                                       |         |                    | US10917647  | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |
|                                                       |         |                    | US11683502  | 1 | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2                                                                                                                                                                                                                                           |

|                                    |         |                    |              |              |                                                                                                        |
|------------------------------------|---------|--------------------|--------------|--------------|--------------------------------------------------------------------------------------------------------|
| Electronics and Telecommunications | VP9-022 | Exemplary Patent/s | US8867854    | 1.5          | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2 |
|                                    |         |                    | US9369737    | 2.8          | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2 |
|                                    |         |                    | US9407937    | 1.5          | 2.37, 2.56, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.15, 8.5.1, 10.2 |
|                                    |         | Family members     | CN103384333  |              |                                                                                                        |
|                                    |         |                    | CN104219523  |              |                                                                                                        |
|                                    |         |                    | US9942554    |              |                                                                                                        |
|                                    | VP9-023 | Exemplary Patent/s | CN103548356  | 3            | 1, 6, 6.4.4, 6.4.5, 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7, 7.4.7, 7.4.10, 8.5, 8.5.1, 8.6.2                  |
|                                    |         |                    | CN107623857  | 1.8          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | CN107888929  | 1            | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR101857755  | 1, 9, 18, 20 | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR101947142  | 1            | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR102046520  | 1.6          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR102046521  | 1.6          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR102046522  | 1.6          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR102046523  | 1.6          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | KR102148466  | 1.6          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | US10575014   | 1, 7         | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | US10992956   | 1.7          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | US11523133   | 1.7          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | US17/894684  | 1,6          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | US18/091540  | 1,7          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    |         |                    | US18/091542  | 1,7          | 6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.5, 7.4.7, 7.4.15, 7.4.16, 8.5.1, 8.6.2                               |
|                                    | VP9-024 | Exemplary Patent/s | IDP000055563 | 1            | 1, 2, 3, 4.6, 6.5, 8.5                                                                                 |
|                                    |         |                    | IDP000067851 | 1            | 1, 2, 3, 4.6, 6.5, 8.5                                                                                 |
|                                    |         |                    | IDP000074830 | 1            | 1, 2, 3, 4.6, 6.5, 8.5                                                                                 |
|                                    |         |                    | JP5911890    | 1            | 1, 2, 3, 4.6, 6.5, 8.5                                                                                 |
|                                    |         |                    | JP6203878    | 1            | 1, 2, 3, 4.6, 6.5, 8.5                                                                                 |
|                                    |         |                    | RU2586017    | 1            | 1, 2, 3, 4.6, 6.5, 8.5                                                                                 |
|                                    |         | Family members     | CA2826157    |              |                                                                                                        |
|                                    |         |                    | CN103583044  |              |                                                                                                        |
|                                    |         |                    | JP6550429    |              |                                                                                                        |
|                                    |         |                    | KR101428030  |              |                                                                                                        |
|                                    |         |                    | KR101461498  |              |                                                                                                        |
|                                    |         |                    | KR101461499  |              |                                                                                                        |
|                                    |         |                    | KR101477771  |              |                                                                                                        |
|                                    |         |                    | US10244252   |              |                                                                                                        |
|                                    | VP9-026 | Exemplary Patent/s | KR102171380  | 1            | 2.3, 2.22, 2.60, 6, 6.1, 6.4, 7.1, 7.4.1, 9.2                                                          |
|                                    |         |                    | KR102275730  | 1            | 2.3, 2.22, 2.60, 6, 6.1, 6.4, 7.1, 7.4.1                                                               |
|                                    |         |                    | KR102363426  | 1            | 2.3, 2.22, 2.60, 6, 6.1, 6.4, 6.4.21, 6.4.24, 7.1, 7.4.1, 7.4.15, 7.4.16, 8.6.2                        |
|                                    |         | Family members     | KR101726276  |              |                                                                                                        |
|                                    |         |                    | KR101797055  |              |                                                                                                        |
|                                    |         |                    | KR101894407  |              |                                                                                                        |
|                                    |         |                    | KR101975254  |              |                                                                                                        |
|                                    | VP9-027 | Exemplary Patent/s | KR101527085  | 1            | 2.21, 4.9.5, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 7.4.15, 7.4.16, 8.5.1, 8.6.2, 9.2, 10.2       |
|                                    |         |                    | KR101527086  | 1            | 2.21, 4.9.5, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 7.4.15, 7.4.16, 8.5.1, 8.6.2, 9.2, 10.2       |
|                                    |         |                    | KR101527087  | 1            | 2.21, 4.9.5, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 7.4.15, 7.4.16, 8.5.1, 8.6.2, 9.2, 10.2       |
|                                    |         |                    | KR101697153  | 1            | 2.21, 4.9.5, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 7.4.15, 7.4.16, 8.5.1, 8.6.2, 9.2, 10.2       |

|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|------------------------------------|-----------|--------------------|-------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electronics and Telecommunications | VP9-027   | Exemplary Patent/s | KR101697154 | 1                                                                                  | 2.21, 4.9.5, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 7.4.15, 7.4.16, 8.5.1, 8.6.2, 9.2, 10.2                                                                                                                                         |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | VP9-028   | Exemplary Patent/s | KR101527444 | 1                                                                                  | 2.19, 2.20, 6.4.4, 6.4.5, 6.4.6, 6.4.8, 6.4.11, 6.4.21, 6.4.24, 7.4.7, 7.4.16                                                                                                                                                            |
|                                    |           | Family members     | CN104488270 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101725818 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101809728 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101809729 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101809730 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101809731 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | TWI563836   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | TWI596935   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | TWI619378   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | TWI619379   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | TWI621353   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | US10341661  |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | US9497465   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | US9628799   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | US9635363   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | US9641845   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | US9723311 |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | VP9-029   | Exemplary Patent/s | KR100882949 | 19                                                                                 | 4.9.5, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8.6.2, 8.7.2, 9.2, 10.1, 10.2                                                                                                                                                      |
|                                    |           |                    | US10499064  | 2                                                                                  | 4.9.5, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8.6.2, 8.7.2, 9.2, 10.1, 10.2                                                                                                                                                      |
|                                    |           |                    | US11330274  | 1.3                                                                                | 4.9.5, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8.6.2, 8.7.2, 9.2, 10.1, 10.2                                                                                                                                                      |
|                                    |           |                    | US11949881  | 3                                                                                  | 1, 2.3, 2.5, 2.6, 2.10, 2.15-2.18, 2.22, 2.29-2.32, 2.37, 2.40-2.43, 2.45-2.47, 2.51, 2.52, 2.56-2.62, 4.9, 4.9.3, 4.9.5, 5.6, 5.14, 6, 6.1, 6.4, 6.4.2-6.4.6, 6.4.21, 6.4.24-6.4.26, 7.3.1, 7.4.5, 7.4.15-7.4.17, 8.1, 8.5, 8.5.1, 10.1 |
|                                    |           |                    | US9154784   | 1                                                                                  | 4.9.5, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8.6.2, 8.7.2, 9.2, 10.1, 10.2                                                                                                                                                      |
|                                    |           |                    | US9736484   | 1                                                                                  | 4.9.5, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8.6.2, 8.7.2, 9.2, 10.1, 10.2                                                                                                                                                      |
|                                    |           |                    | US9819942   | 4                                                                                  | 4.9.5, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8.6.2, 8.7.2, 9.2, 10.1, 10.2                                                                                                                                                      |
|                                    |           | Family members     | US8548060   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | US9225982   |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | VP9-080   | Exemplary Patent/s | KR101095938 | 14                                                                                 | 4.9.5, 5.22, 6.4.15, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.16, 8, 8.1, 8.6.2, 8.7.2, 9.2                                                                                                                                                    |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | VP9-082   | Exemplary Patent/s | KR102439871 | 1                                                                                  | 2.15, 2.45, 3, 6.2.9, 6.2.10, 6.4.25, 7.2.9, 8.6.1, 8.6.2, 8.7.2                                                                                                                                                                         |
|                                    |           | Family members     | KR101854640 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101874015 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101973563 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    | KR101973571 |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | VP9-088   | Exemplary Patent/s | KR101894557 | 1                                                                                  | 1, 4.9.5, 6.4.6, 7.4.5, 8, 8.1, 8.5.1, 9.2.2, 9.3, 9.3.2, 9.3.3, 10.4                                                                                                                                                                    |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    | VP9-089   | Exemplary Patent/s | KR101424219 | 1                                                                                  | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1                                                                                                                                                       |
|                                    |           |                    | KR101527443 | 1                                                                                  | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1                                                                                                                                                       |
|                                    |           |                    | KR102245490 | 1                                                                                  | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1                                                                                                                                                       |
|                                    |           |                    | KR102332284 | 1                                                                                  | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1                                                                                                                                                       |
| TWI612799                          |           |                    | 1           | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1 |                                                                                                                                                                                                                                          |
| TWI651962                          |           |                    | 1           | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1 |                                                                                                                                                                                                                                          |
| TWI651963                          |           |                    | 1           | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1 |                                                                                                                                                                                                                                          |
| TWI653877                          |           |                    | 1           | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1 |                                                                                                                                                                                                                                          |
| TWI662831                          |           |                    | 1           | 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4., 8.5.2, 8.5.2.1 |                                                                                                                                                                                                                                          |
| Family members                     |           | KR101424220        |             |                                                                                    |                                                                                                                                                                                                                                          |
|                                    |           |                    |             |                                                                                    |                                                                                                                                                                                                                                          |

|                                                       |         |                    |                    |   |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------|---------|--------------------|--------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electronics and Telecommunications Research Institute | VP9-097 | Exemplary Patent/s | <b>CN110267048</b> | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.6, 8.6.1, 8.6.2, 8.7.2 |
|                                                       |         |                    | <b>JP6746749</b>   | 3 | 1, 2.3, 2.5, 2.10, 2.19, 2.20, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                      |
|                                                       |         |                    | <b>JP7025491</b>   | 3 | 1, 2.3, 2.5, 2.10, 2.19, 2.20, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                      |
|                                                       |         |                    | <b>JP7358573</b>   | 1 | 2, 5.6, 5.14, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 7.4.3, 7.4.15, 8.1                                                                                                                                                                                                                                                                                                                         |
|                                                       |         |                    | <b>JP7358582</b>   | 3 | 2, 5.6, 5.14, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.15, 8.1, 8.5.2, 8.5.2.1                                                                                                                                                                                                                                                                                         |
|                                                       |         |                    | <b>KR101651594</b> | 1 | 2.18, 2.32, 2.37, 2.46, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.24, 6.4.26, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 7.4.16, 7.4.17, 8.5.2, 8.5.2.1, 8.6.2, 8.7.2                                                                                                                                                                                                                                        |
|                                                       |         |                    | <b>KR101651595</b> | 1 | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.5.2.3, 8.5.2.4                                                                                                                                                                                                                                                                                      |
|                                                       |         |                    | <b>KR101718886</b> | 1 | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.5.2.3, 8.5.2.4                                                                                                                                                                                                                                                                                      |
|                                                       |         |                    | <b>KR101720622</b> | 1 | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2                                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | <b>KR102114036</b> | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.6, 8.6.1, 8.6.2, 8.7.2 |
|                                                       |         |                    | <b>KR102331195</b> | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.6, 8.6.1, 8.6.2, 8.7.2 |
|                                                       |         |                    | <b>US10038907</b>  | 1 | 1, 2.3, 2.5, 2.10, 2.19, 2.20, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                      |
|                                                       |         |                    | <b>US10694191</b>  | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.6, 8.6.1, 8.6.2, 8.7.2 |
|                                                       |         |                    | <b>US11206411</b>  | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.6, 8.6.1, 8.6.2, 8.7.2 |

|                                                       |         |                    |             |     |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------|---------|--------------------|-------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electronics and Telecommunications Research Institute | VP9-097 | Exemplary Patent/s | US9854249   | 1   | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 5.5, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.1, 7.2.11, 7.3, 7.3.1, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.6, 8.6.1, 8.6.2, 8.7.2 |
|                                                       | VP9-098 | Exemplary Patent/s | KR102150089 | 1.8 | 2.26, 2.27, 2.29, 6.2, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 7.2, 7.4.4, 7.4.12, 8, 8.1, 8.5, 8.5.2, 8.5.2.4, 8.6.2, 9.3.2                                                                                                                                                                                                                                                                                                 |
|                                                       |         |                    | KR102253173 | 10  | 2.26, 2.27, 2.29, 6.2, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 7.2, 7.4.4, 7.4.12, 8, 8.1, 8.5, 8.5.2, 8.5.2.4, 8.6.2, 9.3.2                                                                                                                                                                                                                                                                                                 |
|                                                       |         |                    | KR102555224 | 10  | 2.26, 2.27, 2.29, 6.2, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 7.2, 7.4.4, 7.4.12, 8, 8.1, 8.5, 8.5.2, 8.5.2.4, 8.6.2, 9.3.2                                                                                                                                                                                                                                                                                                 |
|                                                       | VP9-108 | Exemplary Patent/s | KR102423641 | 1   | 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 7.4.9, 8.5.2, 8.5.2.1                                                                                                                                                                                                                                                                                                    |
|                                                       |         |                    | KR102504802 | 1   | 6.4.11, 6.4.13, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 7.4.9, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                             |
|                                                       | VP9-109 | Exemplary Patent/s | CN110198441 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | CN110198447 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | CN110198450 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | CN110267048 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | CN110446038 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | JP7271768   | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | JP7414909   | 3   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | KR102412640 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | KR102412641 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | KR102412642 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | KR102559003 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1                                                                                                                                                                                                                                                                                                 |
|                                                       |         |                    | KR102559004 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | KR102620624 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | KR102620625 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | US10536706  | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | US10805612  | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       |         |                    | US10863181  | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                                                                                          |
|                                                       | VP9-110 | Exemplary Patent/s | KR102447543 | 1   | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1                                                                                                                                                                                                                                                                                                 |

|                                                       |         |                    |             |   |                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------|---------|--------------------|-------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electronics and Telecommunications Research Institute | VP9-110 | Exemplary Patent/s | KR102558513 | 1 | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1                                                                                                                                                                                     |
|                                                       |         |                    | KR102558514 | 1 | 2.37, 2.56, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 8.5.2, 8.5.2.1                                                                                                                                                                      |
|                                                       |         |                    | US10848757  | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37, 2.41-2.43, 2.52, 2.56, 2.57, 2.59, 2.60, 5.6, 5.10, 5.14, 6.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.18, 6.4.21, 6.5, 6.5.1, 6.5.3, 6.5.6-6.5.8, 6.5.10, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 7.4.15, 8.1, 8.5, 8.5.2, 8.5.2.1                          |
|                                                       |         |                    | US11284067  | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37, 2.41-2.43, 2.52, 2.56, 2.57, 2.59, 2.60, 5.6, 5.10, 5.14, 6.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.18, 6.4.21, 6.5, 6.5.1, 6.5.3, 6.5.6-6.5.8, 6.5.10, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 7.4.15, 8.1, 8.5, 8.5.2, 8.5.2.1                          |
|                                                       |         |                    | US11843768  | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37, 2.41-2.43, 2.52, 2.56, 2.57, 2.59, 2.60, 5.6, 5.10, 5.14, 6.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.18, 6.4.21, 6.5, 6.5.1, 6.5.3, 6.5.6-6.5.8, 6.5.10, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 7.4.15, 8.1, 8.5, 8.5.2, 8.5.2.1                          |
|                                                       |         |                    | VN40056     | 1 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37, 2.41-2.43, 2.52, 2.56, 2.57, 2.59, 2.60, 5.6, 5.10, 5.14, 6.1, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.18, 6.4.21, 6.5, 6.5.1, 6.5.3, 6.5.6-6.5.8, 6.5.10, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 7.4.15, 8.1, 8.5, 8.5.2, 8.5.2.1                          |
|                                                       | VP9-113 | Exemplary Patent/s | US9794556   | 3 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.28-2.31, 2.37, 2.40-2.43, 2.48, 2.51, 2.61, 4.9.5, 5.4, 6.4.4-6.4.6, 6.4.8, 6.4.21, 6.4.24, 7.4.4, 7.4.5, 7.4.7, 7.4.10, 7.4.15, 8.1, 8.5, 8.5.1                                                                                                                         |
|                                                       | VP9-114 | Exemplary Patent/s | KR102482553 | 2 | 6.4.16, 6.4.18, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 8, 8.1, 8.5.2, 8.5.2.1, 8.6.2                                                                                                                                                                                                                     |
|                                                       | VP9-115 | Exemplary Patent/s | US11595655  | 1 | 1, 2.3, 2.5, 2.6, 2.15-2.17, 2.22, 2.40-2.43, 2.48, 2.51-2.53, 2.61-2.63, 3, 4.9.5, 6.2, 6.2.9, 6.4.4, 6.4.8, 6.4.21, 6.4.24-6.4.26, 7.2.9, 7.4.7, 8.7.2, 9.3, 9.3.1, 9.3.2, 10.2                                                                                                                              |
|                                                       |         |                    | US12010312  | 1 | 1, 2.3, 2.5, 2.15-2.17, 2.22, 2.40-2.43, 2.51-2.53, 2.61-2.63, 3, 6.2, 6.2.9, 6.4.4-6.4.6, 6.4.8, 6.4.15, 6.4.21, 6.4.11, 6.4.21, 6.4.24-6.4.26, 7.2.9, 7.4.5, 7.4.7, 7.4.10, 7.4.15, 8.1, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7.2, 10, 10.2                                                                      |
| Godo Kaisha IP Bridge 1                               | VP9-046 | Exemplary Patent/s | US8009733   | 1 | 1, 2.3, 2.5, 2.10, 2.17, 2.22, 2.26, 2.27, 2.42, 2.48, 2.49, 2.51, 2.52, 2.54, 2.56, 2.57, 2.59, 2.60, 2.63, 3, 4.9, 4.9.1, 4.9.2, 4.9.3, 4.9.4, 4.9.5, 5.1, 5.5, 5.10, 6.1, 6.2, 6.2.11, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.16, 6.4.17, 6.4.21, 7.2.10, 7.4.12, 8.5, 8.5.2, 9.1, 9.2, 9.2.4, 9.3                   |
|                                                       |         | Family members     | US8184697   |   |                                                                                                                                                                                                                                                                                                                |
|                                                       |         |                    | US8204112   |   |                                                                                                                                                                                                                                                                                                                |
|                                                       |         |                    | US8223841   |   |                                                                                                                                                                                                                                                                                                                |
| IDEAHUB Inc.                                          | VP9-036 | Exemplary Patent/s | KR101791163 | 1 | 1, 2, 2.3, 2.9, 2.10, 2.15-2.18, 2.22, 2.36-2.38, 2.40, 2.45, 2.51-2.53, 2.55, 2.59, 2.61, 2.62, 3, 4, 4.6, 4.9, 4.9.1, 4.9.2, 5, 5.7, 5.15, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 7, 7.3, 7.3.1, 7.2.9, 7.2.10, 7.4.3, 7.4.4, 7.4.8, 8.1, 8.6, 8.6.1, 9.1, 9.3, 9.3.1-9.3.4, 10, 10.2 |
|                                                       |         |                    | KR101895362 | 1 | 1, 2, 2.3, 2.9, 2.10, 2.15-2.18, 2.22, 2.36-2.38, 2.40, 2.45, 2.51-2.53, 2.55, 2.59, 2.61, 2.62, 3, 4, 4.6, 4.9, 4.9.1, 4.9.2, 5, 5.7, 5.15, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 7, 7.3, 7.3.1, 7.2.9, 7.2.10, 7.4.3, 7.4.4, 7.4.8, 8.1, 8.6, 8.6.1, 9.1, 9.3, 9.3.1-9.3.4, 10, 10.2 |
|                                                       |         |                    | KR101927384 | 1 | 1, 2, 2.3, 2.9, 2.10, 2.15-2.18, 2.22, 2.36-2.38, 2.40, 2.45, 2.51-2.53, 2.55, 2.59, 2.61, 2.62, 3, 4, 4.6, 4.9, 4.9.1, 4.9.2, 5, 5.7, 5.15, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 7, 7.3, 7.3.1, 7.2.9, 7.2.10, 7.4.3, 7.4.4, 7.4.8, 8.1, 8.6, 8.6.1, 9.1, 9.3, 9.3.1-9.3.4, 10, 10.2 |
|                                                       |         |                    | KR101927385 | 1 | 1, 2, 2.3, 2.9, 2.10, 2.15-2.18, 2.22, 2.36-2.38, 2.40, 2.45, 2.51-2.53, 2.55, 2.59, 2.61, 2.62, 3, 4, 4.6, 4.9, 4.9.1, 4.9.2, 5, 5.7, 5.15, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 7, 7.3, 7.3.1, 7.2.9, 7.2.10, 7.4.3, 7.4.4, 7.4.8, 8.1, 8.6, 8.6.1, 9.1, 9.3, 9.3.1-9.3.4, 10, 10.2 |

|              |         |                    |                    |   |                                                                                                                                                                                                                                                                                                                |
|--------------|---------|--------------------|--------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IDEAHUB Inc. | VP9-036 | Exemplary Patent/s | KR101927386        | 1 | 1, 2, 2.3, 2.9, 2.10, 2.15-2.18, 2.22, 2.36-2.38, 2.40, 2.45, 2.51-2.53, 2.55, 2.59, 2.61, 2.62, 3, 4, 4.6, 4.9, 4.9.1, 4.9.2, 5, 5.7, 5.15, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 7, 7.3, 7.3.1, 7.2.9, 7.2.10, 7.4.3, 7.4.4, 7.4.8, 8.1, 8.6, 8.6.1, 9.1, 9.3, 9.3.1-9.3.4, 10, 10.2 |
|              |         |                    | US9699449          | 1 | 1, 2, 2.3, 2.9, 2.10, 2.15-2.18, 2.22, 2.36-2.38, 2.40, 2.45, 2.51-2.53, 2.55, 2.59, 2.61, 2.62, 3, 4, 4.6, 4.9, 4.9.1, 4.9.2, 5, 5.7, 5.15, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 7, 7.3, 7.3.1, 7.2.9, 7.2.10, 7.4.3, 7.4.4, 7.4.8, 8.1, 8.6, 8.6.1, 9.1, 9.3, 9.3.1-9.3.4, 10, 10.2 |
|              |         | Family members     | CN2L201180039691.0 |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | CN2L201610518674.X |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (DE)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (ES)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (FI)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (FR)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (GB)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (IT)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (NL)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | EP2608540 (SE)     |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | JP6163176          |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | KR101581742        |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | KR101650464        |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | KR101791164        |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | KR101927387        |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | US10212422         |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | US10827174         |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | US10939106         |   |                                                                                                                                                                                                                                                                                                                |
|              |         |                    | US9838691          |   |                                                                                                                                                                                                                                                                                                                |

|                        |         |                    |             |   |                                                                                                                                               |
|------------------------|---------|--------------------|-------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------|
| JVCKENWOOD Corporation | VP9-052 | Exemplary Patent/s | CN103621087 | 1 | 6.4.3, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8, 8.1, 8.5                                                                |
|                        |         |                    | CN105791834 | 1 | 1, 2, 6.4.2, 6.4.3, 6.4.15, 6.4.21, 7.2, 7.2.2, 7.4.3, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                                         |
|                        |         |                    | CN105812806 | 1 | 1, 2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                        |
|                        |         |                    | CN105812807 | 1 | 1, 2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                        |
|                        |         |                    | CN107071428 | 1 | 1, 2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                        |
|                        |         |                    | JP05614381  | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.15, 6.4.21, 6.4.23, 7.2.2, 7.4.3, 7.4.5, 7.4.10, 8.5.1, 10.2                                                         |
|                        |         |                    | JP05678818  | 1 | 5.6, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 6.4.23, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.10, 8.5.1, 10.2                              |
|                        |         |                    | JP5679019   | 1 | 1, 2, 6.4.2, 6.4.3, 6.4.15, 6.4.21, 7.2, 7.2.2, 7.4.3, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                                         |
|                        |         |                    | JP5725107   | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5.1, 10.2             |
|                        |         |                    | JP5725108   | 1 | 1, 2, 6.4.2, 6.4.3, 6.4.15, 6.4.21, 7.2, 7.2.2, 7.4.3, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                                         |
|                        |         |                    | JP5839094   | 1 | 1, 2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                        |
|                        |         |                    | JP5839143   | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 6.4.23, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.10, 8.5.1, 10.2                                   |
|                        |         |                    | JP5839144   | 1 | 1, 2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5, 8.5.1, 10.2                        |
|                        |         |                    | KR101588143 | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5.1, 10.2             |
|                        |         |                    | KR101668575 | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5.1, 10.2             |
|                        |         |                    | KR101729463 | 1 | 2.19, 2.20, 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5.1, 10.2 |
|                        |         |                    | TWI552578   | 7 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5.1, 10.2             |
|                        |         |                    | TWI562603   | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.15, 6.4.21, 6.4.23, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.10, 8.5.1, 10.2                                   |
|                        |         |                    | TWI562604   | 1 | 6.2.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.15, 6.4.21, 7.2.2, 7.4.3, 7.4.4, 7.4.5, 7.4.9, 7.4.10, 7.4.15, 8.5.1, 10.2             |

|                                            |         |                    |                |    |                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------|---------|--------------------|----------------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KAIST and KBS                              | VP9-092 | Exemplary Patent/s | CN102369733    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | CN105959689    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | CN105959690    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | CN105959691    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | CN105959692    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | CN106101705    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | JP6164600      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | JP6164660      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | JP6851263      | 1  | 2, 5.7, 6.3.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.10, 6.4.11, 6.4.21, 7.3.1, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8, 8.1, 8.6.2, 10                                                                                                                                                                                                                                                    |
|                                            |         |                    | JP6851264      | 1  | 2, 5.7, 6.3.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.10, 6.4.11, 6.4.21, 7.3.1, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8, 8.1, 8.6.2, 10                                                                                                                                                                                                                                                    |
|                                            |         |                    | JP6851265      | 1  | 2, 5.7, 6.3.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.10, 6.4.11, 6.4.21, 7.3.1, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8, 8.1, 8.6.2, 10                                                                                                                                                                                                                                                    |
|                                            |         |                    | JP7171646      | 3  | 2, 5.7, 6.3.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.10, 6.4.11, 6.4.21, 7.3.1, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8, 8.1, 8.6.2, 10                                                                                                                                                                                                                                                    |
|                                            |         |                    | KR101250608    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101644967    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101644970    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101648123    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101785431    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101857583    | 4  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101857591    | 4  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR101857598    | 4  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | KR102062894    | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US10462494     | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US11076175     | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US11659210     | 1  | 2, 5.7, 6.3.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.10, 6.4.11, 6.4.21, 7.3.1, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8, 8.1, 8.6.2, 10                                                                                                                                                                                                                                                    |
|                                            |         |                    | US9485512      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US9838719      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US9838721      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US9838722      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         |                    | US9888259      | 1  | 1, 2, 5.1, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.21, 7.4.3, 7.4.8, 7.4.9, 7.4.15, 8.5, 8.5.1, 8.5.2                                                                                                                                                                                                                                                                |
|                                            |         | Family members     | JP6846988      |    |                                                                                                                                                                                                                                                                                                                                                                             |
| Koninklijke Philips N.V.                   | VP9-081 | Exemplary Patent/s | US8774540      | 1  | 2.3, 2.6, 2.10, 2.16, 2.17, 2.22, 2.47, 2.48, 2.52, 2.57, 2.59, 2.60, 2.63, 4.8, 4.9.3-4.9.5, 5.6, 5.14, 5.17, 5.21, 5.23-5.25, 6.1, 6.1.2, 6.2, 6.2.13, 6.3, 6.3.7, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 6.4.26, 7.1, 7.1.2, 7.3, 7.3.5, 7.4.3, 7.4.4, 7.4.15-7.4.17, 8.1, 8.4, 8.4.3, 8.5, 8.5.1, 8.6, 8.6.2, 8.8, 9.2, 9.2.1-9.2.3, 9.3, 9.3.1, 9.3.2, 9.3.3, 9.3.4 |
| Nippon Telegraph and Telephone Corporation | VP9-054 | Exemplary Patent/s | CN1922888      | 10 | 2, 4, 6.4.16, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.8, 6.5.10, 6.5.12, 7.4.11, 8.5.2, 8.5.2.4                                                                                                                                                                                                                                                                              |
|                                            |         |                    | EP1781042 (DE) | 10 | 2, 4, 6.4.16, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.8, 6.5.10, 6.5.12, 7.4.11, 8.5.2, 8.5.2.4                                                                                                                                                                                                                                                                              |
|                                            |         |                    | EP1781042 (FR) | 10 | 2, 4, 6.4.16, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.8, 6.5.10, 6.5.12, 7.4.11, 8.5.2, 8.5.2.4                                                                                                                                                                                                                                                                              |
|                                            |         |                    | EP1781042 (GB) | 10 | 2, 4, 6.4.16, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.8, 6.5.10, 6.5.12, 7.4.11, 8.5.2, 8.5.2.4                                                                                                                                                                                                                                                                              |

|                                            |         |                    |            |    |                                                                                                |
|--------------------------------------------|---------|--------------------|------------|----|------------------------------------------------------------------------------------------------|
| Nippon Telegraph and Telephone Corporation | VP9-054 | Exemplary Patent/s | KR10941495 | 10 | 2, 4, 6.4.16, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.8, 6.5.10, 6.5.12, 7.4.11, 8.5.2, 8.5.2.4 |
|                                            |         |                    | TWI268715  | 10 | 2, 4, 6.4.16, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.8, 6.5.10, 6.5.12, 7.4.11, 8.5.2, 8.5.2.4 |
|                                            |         | Family members     | JP05052134 |    |                                                                                                |
|                                            |         |                    | US9402087  |    |                                                                                                |

|                  |         |                    |             |    |                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|---------|--------------------|-------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NTT Docomo, Inc. | VP9-102 | Exemplary Patent/s | US9031125   | 1  | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.26, 2.27, 2.39-2.42, 2.51, 2.52, 2.54, 2.56, 2.57, 2.59, 2.60, 3, 4.9, 4.9.1-4.9.5, 5.6, 5.13-5.15, 6.1, 6.2, 6.2.11, 6.3, 6.3.12, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16-6.4.21, 6.4.24, 6.4.26, 6.5.1, 6.5.12, 7.2, 7.2.10, 7.3.6, 7.4.1, 7.4.3, 7.4.9, 7.4.11, 7.4.12, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.5.2.4, 8.6, 8.6.1, 8.6.2, 8.10 |
|                  | VP9-104 | Exemplary Patent/s | CN103004206 | 10 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.9, 6.1, 6.2, 6.2.13, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17- 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.6-6.5.8, 6.5.10-6.5.12, 7.1, 7.2.11, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7.2, 10.2           |
|                  |         |                    | KR101770662 | 1  | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.9, 6.1, 6.2, 6.2.13, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17- 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.6-6.5.8, 6.5.10-6.5.12, 7.1, 7.2.11, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7.2, 10.2           |
|                  |         |                    | US9185409   | 11 | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.26, 2.27, 2.37-2.39, 2.41-2.43, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.9, 6.1, 6.2, 6.2.13, 6.4, 6.4.2-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17- 6.4.19, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.6-6.5.8, 6.5.10-6.5.12, 7.1, 7.2.11, 7.4.1, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.13, 7.4.15-7.4.17, 8.1, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7.2, 10.2           |

|             |         |                    |                |    |                                                                                                                                                                                                                                  |
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| Orange S.A. | VP9-055 | Exemplary Patent/s | CN102804768    | 9  | 1,2,2.5,5.5.1,5.4, 5.5, 5.13, 6, 6.4.16, 6.4.19, 6.4.20, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 7, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                                         |
|             |         |                    | EP2443835 (CY) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (DE) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (ES) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (FR) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (GB) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (HU) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (IT) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (MK) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (PT) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | EP2443835 (TR) | 9  | 2.5, 5.1, 5.13, 5.4, 5.5, 6.4.16, 6.5.6, 7.4.11                                                                                                                                                                                  |
|             |         |                    | IN416037       | 9  | 1,2,2.5,5.5.1,5.4, 5.5, 5.13, 6, 6.4.16, 6.4.19, 6.4.20, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 7, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                                         |
|             |         |                    | RU2553062      | 10 | 1,2,2.5,5.5.1,5.4, 5.5, 5.13, 6, 6.4.16, 6.4.19, 6.4.20, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 7, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                                         |
|             |         |                    | US8891628      | 10 | 1,2,2.5,5.5.1,5.4, 5.5, 5.13, 6, 6.4.16, 6.4.19, 6.4.20, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 7, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                                         |
|             |         |                    | ZA201109188    | 12 | 1,2,2.5,5.5.1,5.4, 5.5, 5.13, 6, 6.4.16, 6.4.19, 6.4.20, 6.4.21, 6.5, 6.5.1, 6.5.2, 6.5.6, 7, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 8.5, 8.5.2, 8.5.2.1                                                                         |
|             | VP9-056 | Exemplary Patent/s | CN102498718    | 1  | 3, 5.6, 5.13, 6.5.1, 6.5.10, 6.5.11                                                                                                                                                                                              |
|             |         |                    | US10051283     | 1  | 2.3, 2.5, 2.22, 2.27, 2.39, 2.49, 2.52, 2.56, 2.57, 2.59, 2.61, 2.62, 3, 5.4, 5.5, 5.6, 5.13, 6.4.3, 6.4.4, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.2, 6.5.6, 6.5.7, 6.5.8, 6.5.10, 6.5.11, 6.5.12, 7.4.3, 7.4.4, 7.4.13 |

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| Orange S.A.          | VP9-099 | Exemplary Patent/s | CN101790848 | 7  | 2, 2.3, 2.5, 2.57, 5.1, 5.6, 6.3.1, 6.4.10, 7.3, 7.3.1, 7.4.8, 8, 8.1, 8.6.2                                                                                                                                                                                                                                       |
|                      |         |                    | IN302732    | 8  | 2, 2.3, 2.5, 2.57, 5.1, 5.6, 6.3.1, 6.4.10, 7.3, 7.3.1, 7.4.8, 8, 8.1, 8.6.2                                                                                                                                                                                                                                       |
|                      |         |                    | JP5613561   | 8  | 2, 2.3, 2.5, 2.57, 5.1, 5.6, 6.3.1, 6.4.10, 7.3, 7.3.1, 7.4.8, 8, 8.1, 8.6.2                                                                                                                                                                                                                                       |
|                      | VP9-100 | Exemplary Patent/s | CN101375609 | 8  | 2, 5.65.13, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 7.2.10, 7.4.1, 7.4.11, 7.4.13, 7.4.14, 8.1, 8.5, 8.5.1, 8.5.2, 8.5.2.3                                                                                                                                                                                           |
|                      |         |                    | IN272289    | 9  | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.25-2.31, 2.39, 2.41-2.43, 2.51-2.53, 2.55-2.60, 5.5, 5.6, 5.13, 5.14, 6.1, 6.2, 6.2.11, 6.2.13, 6.4, 6.4.2-6.4.6, 6.4.8, 6.4.11, 6.4.13, 6.4.15-6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 7.2.10, 7.4.4, 7.4.5, 7.4.10-7.4.14, 8.1, 8.5, 8.5.1, 8.5.2, 8.5.2.2-8.5.2.4, 8.6, 8.6.2 |
|                      |         |                    | JP5280860   | 9  | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.25-2.31, 2.39, 2.41-2.43, 2.51-2.53, 2.55-2.60, 5.5, 5.6, 5.13, 5.14, 6.1, 6.2, 6.2.11, 6.2.13, 6.4, 6.4.2-6.4.6, 6.4.8, 6.4.11, 6.4.13, 6.4.15-6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 7.2.10, 7.4.4, 7.4.5, 7.4.10-7.4.14, 8.1, 8.5, 8.5.1, 8.5.2, 8.5.2.2-8.5.2.4, 8.6, 8.6.2 |
|                      |         |                    | KR101359736 | 9  | 2, 5.65.13, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 7.2.10, 7.4.1, 7.4.11, 7.4.13, 7.4.14, 8.1, 8.5, 8.5.1, 8.5.2, 8.5.2.3                                                                                                                                                                                           |
|                      |         |                    | US8611413   | 8  | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.25-2.31, 2.39, 2.41-2.43, 2.51-2.53, 2.55-2.60, 5.5, 5.6, 5.13, 5.14, 6.1, 6.2, 6.2.11, 6.2.13, 6.4, 6.4.2-6.4.6, 6.4.8, 6.4.11, 6.4.13, 6.4.15-6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 7.2.10, 7.4.4, 7.4.5, 7.4.10-7.4.14, 8.1, 8.5, 8.5.1, 8.5.2, 8.5.2.2-8.5.2.4, 8.6, 8.6.2 |
|                      | VP9-106 | Exemplary Patent/s | US9100038   | 8  | 1, 2.3, 2.5, 2.10, 2.15-2.17, 2.22, 2.52, 2.53, 2.55-2.60, 5.6, 5.14, 6.1, 6.2, 6.2.11, 6.2.13, 6.3, 6.3.1, 6.4, 6.4.2-6.4.6, 6.4.10, 6.4.11, 6.4.21, 6.5.4.24, 6.4.25, 7.3, 7.3.1, 7.4.8, 7.4.15, 8.1, 8.6, 8.6.2, 8.7, 8.7.2                                                                                     |
|                      |         |                    |             |    |                                                                                                                                                                                                                                                                                                                    |
| Sejong University    | VP9-103 | Exemplary Patent/s | KR101440731 | 11 | .3, 2.15, 2.16, 2.17, 2.47, 2.57, 2.60, 4.9.1, 5.14, 6.1, 6.2, 6.2.13, 6.4, 6.4.1, 6.4.2, 7.2.11, 8, 8.1                                                                                                                                                                                                           |
|                      | VP9-112 | Exemplary Patent/s | KR101549016 | 6  | 2.3, 2.15, 2.16, 2.17, 2.57, 2.60, 4.9.1, 5.14, 6.1, 6.2, 6.2.13, 6.4, 7.2.11, 8, 8.1                                                                                                                                                                                                                              |
|                      |         |                    | KR101549017 | 5  | 2.3, 2.15, 2.16, 2.17, 2.57, 2.60, 4.9.1, 5.14, 6.1, 6.2, 6.2.13, 6.4, 7.2.11, 8, 8.1                                                                                                                                                                                                                              |
|                      |         |                    | KR101549018 | 5  | 2.3, 2.15, 2.16, 2.17, 2.57, 2.60, 4.9.1, 5.14, 6.1, 6.2, 6.2.13, 6.4, 7.2.11, 8, 8.1                                                                                                                                                                                                                              |
|                      |         |                    | KR101614402 | 5  | 2.3, 2.15, 2.16, 2.17, 2.57, 2.60, 4.9.1, 5.14, 6.1, 6.2, 6.2.13, 6.4, 7.2.11, 8, 8.1                                                                                                                                                                                                                              |
| SK Planet Co., Ltd   | VP9-101 | Exemplary Patent/s | US10334271  | 4  | 2.5, 2.16, 2.17, 2.39, 4, 4.7, 4.8, 5.6, 5.14, 6.1, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.8, 6.5.10, 6.5.11, 6.5.12, 6.5.14, 7.4.3, 7.4.4, 7.4.11, 7.4.13, 7.4.15, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2       |
|                      |         |                    | US10341679  | 4  | 2.5, 2.16, 2.17, 2.39, 4, 4.7, 4.8, 5.6, 5.14, 6.1, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.4.26, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.8, 6.5.10, 6.5.11, 6.5.12, 6.5.14, 7.4.3, 7.4.4, 7.4.11, 7.4.13, 7.4.15, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.3       |
| SK Telecom Co., Ltd. | VP9-060 | Exemplary Patent/s | KR101487436 | 26 | 1, 2.3, 2.5, 2.16, 2.17, 2.31, 4, 4.9, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7.2                                                                                                                                                              |
|                      |         |                    | US10298954  | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.31, 4, 4.9, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7.2                                                                                                                                                              |
|                      |         |                    | US9654798   | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.31, 4, 4.9, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7.2                                                                                                                                                              |
|                      |         |                    |             |    |                                                                                                                                                                                                                                                                                                                    |

|                      |         |                    |             |      |                                                                                                                                                                                                      |
|----------------------|---------|--------------------|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SK Telecom Co., Ltd. | VP9-061 | Exemplary Patent/s | KR101464944 | 1    | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      |         |                    | KR101464949 | 1    | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      |         |                    | KR101483495 | 1    | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      |         |                    | KR101534014 | 1    | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      |         |                    | KR101537767 | 1    | 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                                                  |
|                      |         |                    | US9674551   | 1, 5 | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      |         |                    | US9838696   | 1    | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      |         |                    | US9854250   | 1    | 1, 2.3, 2.5, 2.16. 2.17, 2.22, 2.31, 2.37, 2.48, 2.51, 2.52, 2.53, 2.56, 2.59, 2.61, 2.62, 5.4, 5.7, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 8.5, 8.5.1, 8.6, 8.6.2, 8.7.2 |
|                      | VP9-062 | Exemplary Patent/s | KR101458471 | 1    | 2.17, 2.31, 6, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 7.4.16, 7.4.17, 8.5, 8.5.1, 8.6, 8.6.2, 8.7, 8.7.2                               |
|                      |         |                    | KR101608885 | 1    | 2.17, 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                            |
|                      |         |                    | KR101608888 | 1    | 2.17, 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                            |
|                      |         |                    | KR101608895 | 1    | 2.17, 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                            |
|                      |         |                    | KR101648910 | 1    | 2.17, 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                            |
|                      |         |                    | US8818114   | 1    | 2.17, 2.31, 6, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.4, 7.4.5, 7.4.8, 7.4.15, 7.4.16, 7.4.17, 8.5, 8.5.1, 8.6, 8.6.2, 8.7, 8.7.2                               |
|                      |         |                    | US9148660   | 1    | 2.17, 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                            |
|                      |         |                    | US9491467   | 1    | 2.17, 2.31, 2.61, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.26, 7.4.5, 7.4.8, 7.4.15, 8.5.1, 8.6.2                                                                                            |
|                      | VP9-063 | Exemplary Patent/s | KR101364195 | 1    | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | KR101544390 | 1    | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | KR101567963 | 1    | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | KR101567964 | 1    | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |

|                      |         |                    |             |   |                                                                                                                                                                                                                                                                                        |
|----------------------|---------|--------------------|-------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SK Telecom Co., Ltd. | VP9-063 | Exemplary Patent/s | KR101567990 | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10                                                                                   |
|                      |         |                    | US9369714   | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10                                                                                   |
|                      |         |                    | US9992510   | 6 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10                                                                                   |
|                      | VP9-064 | Exemplary Patent/s | KR101377527 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.4                                                                  |
|                      |         |                    | KR101575605 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.4                                                                  |
|                      |         |                    | KR101575616 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.4                                                                  |
|                      |         |                    | KR101575635 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.4                                                                  |
|                      |         |                    | KR101575645 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.4                                                                  |
|                      |         |                    | US9137546   | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.4                                                                  |
|                      |         | Family members     | US9628815   |   |                                                                                                                                                                                                                                                                                        |
|                      | VP9-065 | Exemplary Patent/s | CN102362498 | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | CN104935939 | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | CN105072448 | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | CN105072449 | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | KR101582493 | 2 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | KR101582495 | 2 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | KR101590511 | 2 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |

|                      |         |                    |                |   |                                                                                                                                                                                                                                                                                        |
|----------------------|---------|--------------------|----------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SK Telecom Co., Ltd. | VP9-065 | Exemplary Patent/s | US9070179      | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | US9363531      | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | US9420304      | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      |         |                    | US9445118      | 1 | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.46, 2.52, 4.7, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.24, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.11, 7.4.13, 7.4.14, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.7.2 |
|                      | VP9-066 | Exemplary Patent/s | KR101479129    | 1 | 1, 2.3, 2.5, 2.10, 2.16, 2.17, 2.22, 2.60, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.5.2, 8.6.2, 10.2                                                                                                                     |
|                      |         |                    | US9549190      | 1 | 1, 2.3, 2.5, 2.10, 2.16, 2.17, 2.22, 2.60, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.5.2, 8.6.2, 10.2                                                                                                                     |
|                      |         |                    | US9565444      | 1 | 1, 2.3, 2.5, 2.10, 2.16, 2.17, 2.22, 2.60, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.5.2, 8.6.2, 10.2                                                                                                                     |
|                      |         |                    | US9609334      | 1 | 1, 2.3, 2.5, 2.10, 2.16, 2.17, 2.22, 2.60, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.5.2, 8.6.2, 10.2                                                                                                                     |
|                      |         |                    | US9609335      | 1 | 1, 2.3, 2.5, 2.10, 2.16, 2.17, 2.22, 2.60, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.13, 6.4.21, 6.4.24, 7.4.3, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.5.2, 8.6.2, 10.2                                                                                                                     |
|                      | VP9-067 | Exemplary Patent/s | CN102986219    | 1 | 2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.11, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 8.8, 8.8.2                                                                                                                          |
|                      |         |                    | CN105163131    | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (BE) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (CZ) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (DE) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (ES) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (GB) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (HU) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (IT) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (NL) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (PL) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (RO) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |
|                      |         |                    | EP2571269 (SE) | 1 | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                                                                                             |

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|                      |         |                    |                |    |                                                                                                                                                                                                             |
|----------------------|---------|--------------------|----------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SK Telecom Co., Ltd. | VP9-067 | Exemplary Patent/s | EP3128755 (RO) | 1  | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                  |
|                      |         |                    | EP3128755 (SE) | 1  | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                  |
|                      |         |                    | EP3128755 (TR) | 1  | 1, 2, 5.4, 6.4.3, 6.4.10, 6.4.15, 6.4.16, 6.4.18, 6.4.19, 6.4.24, 7.4.3, 7.4.8, 7.4.10, 7.4.11, 7.4.13, 7.4.16, 8.5.2, 8.6, 8.6.2, 8.8, 8.8.2, 8.8.5, 10.2                                                  |
|                      |         | Family members     | US9479791      |    |                                                                                                                                                                                                             |
|                      |         |                    | US9532065      |    |                                                                                                                                                                                                             |
|                      |         |                    | US9787988      |    |                                                                                                                                                                                                             |
|                      | VP9-068 | Exemplary Patent/s | CN102273206    | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 8, 8.1, 8.10                             |
|                      |         |                    | CN103327338    | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 8, 8.1, 8.10                             |
|                      |         |                    | CN103354614    | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 8, 8.1, 8.10                             |
|                      |         |                    | KR101279573    | 38 | 1, 2.3, 2.5, 2.16, 2.17, 2.19, 2.20, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | KR101314632    | 13 | 1, 2.3, 2.5, 2.16, 2.17, 2.19, 2.20, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | KR101316710    | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 8, 8.1, 8.10                             |
|                      |         |                    | KR101483174    | 15 | 1, 2.3, 2.5, 2.16, 2.17, 2.19, 2.20, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | US8976863      | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.19, 2.20, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 7.4.14, 8, 8.1, 8.10 |
|                      |         |                    | US9392300      | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.27, 2.39, 2.52, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.4, 7.4.11, 7.4.13, 8, 8.1, 8.10                             |
|                      |         | Family members     | CN103297784    |    |                                                                                                                                                                                                             |
|                      |         |                    | CN103297785    |    |                                                                                                                                                                                                             |
|                      |         |                    | KR101445835    |    |                                                                                                                                                                                                             |
|                      |         |                    | US9781445      |    |                                                                                                                                                                                                             |
|                      |         |                    | US9794590      |    |                                                                                                                                                                                                             |
|                      |         |                    | US9955182      |    |                                                                                                                                                                                                             |
|                      | VP9-087 | Exemplary Patent/s | CN102598669    | 19 | 2.3, 2.5, 2.6, 2.9, 2.16, 2.17, 2.22, 2.31, 2.36, 2.42, 2.61, 2.62, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.25, 7.4.3, 7.4.8, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.6.2, 10.2                 |
|                      |         |                    | CN104506875    | 9  | 2.3, 2.5, 2.6, 2.9, 2.16, 2.17, 2.22, 2.31, 2.36, 2.42, 2.61, 2.62, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.25, 7.4.3, 7.4.8, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.6.2, 10.2                 |
|                      |         |                    | CN104506876    | 1  | 2.3, 2.5, 2.6, 2.9, 2.16, 2.17, 2.22, 2.31, 2.36, 2.42, 2.61, 2.62, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.25, 7.4.3, 7.4.8, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.6.2, 10.2                 |
|                      |         |                    | CN104539957    | 9  | 2.3, 2.5, 2.6, 2.9, 2.16, 2.17, 2.22, 2.31, 2.36, 2.42, 2.61, 2.62, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.25, 7.4.3, 7.4.8, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.6.2, 10.2                 |
|                      |         |                    | CN104539974    | 1  | 2.3, 2.5, 2.6, 2.9, 2.16, 2.17, 2.22, 2.31, 2.36, 2.42, 2.61, 2.62, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.25, 7.4.3, 7.4.8, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.6.2, 10.2                 |
|                      |         |                    | US9154809      | 8  | 2.3, 2.5, 2.6, 2.9, 2.16, 2.17, 2.22, 2.31, 2.36, 2.42, 2.61, 2.62, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.21, 6.4.24, 6.4.25, 7.4.3, 7.4.8, 7.4.9, 8, 8.1, 8.5, 8.5.1, 8.6.2, 10.2                 |
|                      |         | Family members     | KR101302660    |    |                                                                                                                                                                                                             |

|                      |         |                    |             |    |                                                                                                                                                                                                 |
|----------------------|---------|--------------------|-------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SK Telecom Co., Ltd. | VP9-087 | Family members     | KR101369174 |    |                                                                                                                                                                                                 |
|                      |         |                    | KR101544379 |    |                                                                                                                                                                                                 |
|                      |         |                    | KR101575634 |    |                                                                                                                                                                                                 |
|                      |         |                    | KR101575638 |    |                                                                                                                                                                                                 |
|                      |         |                    | US9584810   |    |                                                                                                                                                                                                 |
|                      |         |                    | US9621895   |    |                                                                                                                                                                                                 |
|                      | VP9-105 | Exemplary Patent/s | KR101356613 | 14 | 6.2, 6.4.8, 6.4.11, 6.4.16, 6.4.18, 6.4.21, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.2, 7.4.4, 7.4.7, 7.4.11, 7.4.15, 8.5.2, 8.5.2.1                                                                     |
|                      |         |                    | KR101377530 | 20 | 6.2, 6.4.16, 6.4.18, 6.5.1, 6.5.6, 6.5.11, 6.5.12, 7.2, 7.4.4, 7.4.11                                                                                                                           |
|                      |         |                    | US9154806   | 1  | 1, 2.3, 2.5, 2.16, 2.17, 2.22, 2.25-2.27, 2.39, 2.40, 2.52, 2.63, 4.9.5, 5.5, 5.13, 6.2, 6.4.4, 6.4.5, 6.4.11, 6.4.18, 6.5.1, 6.5.2, 6.5.6, 6.5.11, 6.5.12, 7.2, 7.4.11, 9.1, 9.3, 9.3.1, 9.3.2 |
|                      |         |                    |             |    |                                                                                                                                                                                                 |

|                     |         |                    |             |    |                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|---------|--------------------|-------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toshiba Corporation | VP9-078 | Exemplary Patent/s | CN102763416 | 7  | 2.2.19, 2.20, 2.3, 2.37, 2.48, 2.62, 3, 5, 5.1, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.3.14, 6.4.25, 7.3.5, 7.4.5, 7.4.10, 9.3, 9.3.1, 10.1, 10.2                                                                                                                                                                                                                                                      |
|                     |         |                    | CN103024391 | 7  | 1, 2, 2.18, 2.37, 2.46, 2.62, 3, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.4.5, 6.4.6, 6.4.11, 7.4.5, 8, 8.1, 9.3, 9.3.1, 10.2                                                                                                                                                                                                                                                                            |
|                     |         |                    | JP05323209  | 1  | 2, 2.3, 2.19, 2.48, 2.51, 2.59, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.4.6, 6.4.25, 6.4.26, 7.4.5, 8, 8.1, 9, 9.2, 9.3, 9.3.1, 10, 10.1, 10.2                                                                                                                                                                                                                                                       |
|                     |         |                    | JP05432359  | 1  | 2, 2.3, 2.48, 2.51, 2.59, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.4.6, 6.4.25, 6.4.26, 7.4.5, 8.1, 9, 9.2, 9.3, 9.3.1, 10, 10.1, 10.2                                                                                                                                                                                                                                                                |
|                     |         |                    | JP05432412  | 2  | 2, 2.3, 2.45, 2.59, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.2.9, 6.4.5, 6.4.6, 6.4.25, 7.4.5, 8, 8.1, 9.3, 9.3.1, 10, 10.1, 10.2                                                                                                                                                                                                                                                                     |
|                     |         |                    | JP05525650  | 2  | 2, 2.3, 2.45, 2.48, 2.51, 2.59, 3, 5, 5.1, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.2.9, 6.4.25, 7, 7.4.5, 8, 8.1, 10, 10.1, 10.2                                                                                                                                                                                                                                                                        |
|                     |         |                    | JP05526277  | 1  | 2, 2.3, 2.16, 2.45, 2.48, 2.51, 2.59, 5, 5.1, 5.4, 5.7, 5.8, 5.9, 5.13, 5.22, 6, 6.2.9, 6.4.25, 7, 7.4.5, 7.4.11, 8, 8.1, 8.7.2, 10, 10.2                                                                                                                                                                                                                                                      |
|                     |         |                    | JP05597782  | 2  | 2, 2.3, 2.45, 2.48, 2.51, 2.59, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.2.9, 6.4.25, 7, 7.45, 8, 8.1, 10, 10.1, 10.2,                                                                                                                                                                                                                                                                                |
|                     |         |                    | JP05696248  | 10 | 2, 2.3, 2.16, 2.19, 2.45, 2.59, 5, 5.1, 5.4, 5.7, 5.8, 5.9, 5.13, 5.22, 6, 6.2.9, 6.4.25, 7, 7.4.5, 7.4.11, 8, 8.1, 8.7, 8.7.2, 9.2, 9.3.2, 10, 10.1, 10.2                                                                                                                                                                                                                                     |
|                     |         |                    | JP05908619  | 3  | 2, 2.3, 2.45, 2.48, 2.51, 2.59, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 6, 6.2.9, 7, 7.4.5, 5, 5.7, 8, 8.1, 10, 10.2, 6.4.25, 10, 10.1, 10.2,                                                                                                                                                                                                                                                             |
|                     |         |                    | US9113138   | 9  | 1, 2, 2.1, 2.3, 2.5, 2.10, 2.13, 2.17, 2.18, 2.22, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 3, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 6.1, 6.3, 6.3.3, 6.3.14, 6.4.4, 6.4.5, 6.4.6, 6.4.11, 6.4.15, 6.4.21, 6.4.24, 6.4.25, 7.4.5, 8.1, 8.5, 8.5.1, 8.7, 8.7.2, 9.2, 9.2.1, 9.2.2, 9.3, 9.3.1, 9.3.2, 9.3.3, 10.1, 10.2, 10.4.                                            |
|                     |         |                    | US9113139   | 9  | 1, 2, 2.1, 2.3, 2.5, 2.10, 2.13, 2.17, 2.18, 2.22, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 5.25, 6.1, 6.4.4, 6.4.5, 6.4.6, 6.4.15, 6.4.24, 6.4.25, 7, 7.4.5, 8.1, 8.5, 8.5.1, 8.7, 8.7.2, 10, 10.1                                                                                                                                |
|                     |         |                    | US9143777   | 2  | 1, 2, 2.1, 2.3, 2.5, 2.6, 2.10, 2.13, 2.17, 2.18, 2.22, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 3, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 5.25, 6.1, 6.4, 6.4.2, 6.4.3,, 6.4.4, 6.4.5, 6.4.6, 6.4.15, 6.4.21, 6.4.24, 6.4.25, 7, 7.4.5, 7.4.10, 7.4.15, 8.1, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7, 8.7.2, 9.3, 9.3.1, 9.3.2, 10.1, 10.2, and 10.4.       |
|                     |         |                    | US9154779   | 2  | 1, 2, 2.1, 2.3, 2.5, 2.10, 2.13, 2.17, 2.18, 2.22, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 3, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 5.25, 6.1, 6.4.4, 6.4.5, 6.4.6, 6.4.21, 6.4.24, 6.4.25, 7, 7.4.5, 8.1, 8.5, 8.5.1, 8., 6, 8.6.1, 8.6.2, 8.7, 8.7.1.1, 8.7.1.3, 8.7.1.9, 8.7.2, 10, 10.1, and 10.2.                                                                  |
|                     |         |                    | US9294768   | 2  | 1, 2, 2.1, 2.3, 2.5, 2.6, 2.10, 2.13, 2.17, 2.18, 2.22, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 3, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 5.25, 6.1, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.15, 6.4.21, 6.4.24, 6.4.25, 7, 7.4.5, 7.4.10, 7.4.11, 7.4.15, 8.1, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7, 8.7.2, 9.3, 9.3.1, 9.3.2, 10.1, 10.2 and 10.4. |

|                      |         |                    |                  |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------|---------|--------------------|------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toshiba Corporation  | VP9-078 | Exemplary Patent/s | US9392282        | 10 | 1, 2, 2.1, 2.3, 2.5, 2.6, 2.10, 2.13, 2.17, 2.18, 2.22, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 3, 5, 5.4, 5.7, 5.8, 5.22, 5.25, 6.1, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.15, 6.4.21, 6.4.24, 6.4.25, 7.4.5, 7.4.10, 7.4.15, 8.1, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7, 8.7.2, 9.3, 9.3.1, 9.3.2, 10.1, 10.2, 10.4               |
|                      |         |                    | VN16277          | 9  | 1, 2, 2.1, 2.3, 2.5, 2.10, 2.13, 2.17, 2.18, 2.22, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 5.25, 6.1, 6.4.4, 6.4.5, 6.4.6, 6.4.15, 6.4.24, 6.4.25, 7, 7.4.5, 8.1, 8.5, 8.5.1, 8.7, 8.7.2, 10, 10.1                                                                                                                          |
|                      |         |                    | VN17212          | 2  | 1, 2, 2.1, 2.3, 2.5, 2.6, 2.10, 2.13, 2.17, 2.18, 2.22, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 2.37, 2.41, 2.42, 2.46, 2.59, 2.60, 2.61, 2.62, 2.63, 3, 5, 5.4, 5.7, 5.8, 5.9, 5.22, 5.25, 6.1, 6.4, 6.4.2, 6.4.3,, 6.4.4, 6.4.5, 6.4.6, 6.4.15, 6.4.21, 6.4.24, 6.4.25, 7, 7.4.5, 7.4.10, 7.4.15, 8.1, 8.5, 8.5.1, 8.6, 8.6.1, 8.6.2, 8.7, 8.7.2, 9.3, 9.3.1, 9.3.2, 10.1, 10.2, and 10.4. |
|                      |         | Family members     | US9148659        |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| Xylene Holdings S.A. | VP9-018 | Exemplary Patent/s | BRPI0214328      | 1  | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3                                                                                                                                                                                                                                                                                                                          |
|                      | VP9-053 | Exemplary Patent/s | BR112012025206.2 | 1  | 1, 2, 4.9.5, 5.1, 5.5, 5.6, 6.4.10, 6.4.21, 8.5.2, 8.6, 9.2, 9.3                                                                                                                                                                                                                                                                                                                         |
|                      |         |                    | CA2795425        | 2  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | CN106998473      | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | CN107046644      | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | IN416539         | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | JP06605063       | 1  | 1, 2, 4.9.5, 5.1, 5.5, 5.6, 6.4.10, 6.4.21, 8.5.2, 8.6, 9.2, 9.3                                                                                                                                                                                                                                                                                                                         |
|                      |         |                    | MX353107         | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | MX353109         | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | RU2663374        | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | RU2716032        | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | SG10201502226S   | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | TWI688267        | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | TWI765223        | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         |                    | US10390011       | 1  | 1, 2, 4.9.5, 5.1, 5.5, 5.6, 6.4.10, 6.4.21, 8.5.2, 8.6, 9.2, 9.3                                                                                                                                                                                                                                                                                                                         |
|                      |         |                    | US10412385       | 1  | 1, 2, 4.9.5, 5.1, 5.5, 5.6, 6.4.10, 6.4.21, 8.5.2, 8.6, 9.2, 9.3                                                                                                                                                                                                                                                                                                                         |
|                      |         |                    | US9973753        | 1  | 1, 2.3, 2.39, 2.5, 2.15, 2.16, 2.17, 2.22, 4.9.5, 5.1, 5.5, 5.6, 6.2.3, 6.2.6, 6.4.3, 6.4.3, 6.4.4, 6.4.21, 7.4.3, 8.5, 8.5.2, 9.2, 9.3, 9.3.1, 9.3.3, 10.2                                                                                                                                                                                                                              |
|                      |         | Family members     | KR101389163      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | KR101500914      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | KR101540899      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | KR101817481      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | MX315648         |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | MX321449         |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | MX322916         |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | MX332789         |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|                      |         |                    | MX332791         |    |                                                                                                                                                                                                                                                                                                                                                                                          |

|                      |         |                    |                         |   |                                                                                                                                                        |
|----------------------|---------|--------------------|-------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Xylene Holdings S.A. | VP9-053 | Family members     | <b>RU2020107720</b>     |   |                                                                                                                                                        |
|                      |         |                    | <b>RU2523071</b>        |   |                                                                                                                                                        |
|                      |         |                    | <b>RU2573222</b>        |   |                                                                                                                                                        |
|                      |         |                    | <b>RU2627101</b>        |   |                                                                                                                                                        |
|                      |         |                    | <b>RU2699049</b>        |   |                                                                                                                                                        |
|                      |         |                    | <b>SG184528</b>         |   |                                                                                                                                                        |
|                      |         |                    | <b>TWI520617</b>        |   |                                                                                                                                                        |
|                      |         |                    | <b>TWI601415</b>        |   |                                                                                                                                                        |
|                      |         |                    | <b>US10469839</b>       |   |                                                                                                                                                        |
|                      |         |                    | <b>US10554970</b>       |   |                                                                                                                                                        |
|                      | VP9-079 | Exemplary Patent/s | <b>BR112013006499.4</b> | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>CN103222265</b>      | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>CN106454379</b>      | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>CN106713930</b>      | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>HK1186031</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>IN359148</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>JP5486091</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>KR101554792</b>      | 2 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>MX324042</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>MX326851</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>MX326852</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>MX326853</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>MX326854</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>RU2549512</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>RU2597499</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>RU2654136</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>SG10201506682S</b>   | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>SG10201802064V</b>   | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>SG189114</b>         | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>TWI571108</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | <b>US9369730</b>        | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |

|                      |         |                    |                |   |                                                                                                                                                        |
|----------------------|---------|--------------------|----------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Xylene Holdings S.A. | VP9-079 | Exemplary Patent/s | US9894376      | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         |                    | US9900611      | 1 | 1, 2, 5.5, 5.13, 6.4.3, 6.4.4, 6.4.5, 6.4.13, 6.4.15, 6.4.16, 6.4.18, 6.5, 6.5.1, 6.5.7, 6.5.8, 7.2.6, 7.3.6, 7.4.11, 7.4.13, 8.5.2, 8.6.2, 9.2, 9.2.1 |
|                      |         | Family members     | CA2813232      |   |                                                                                                                                                        |
|                      |         |                    | CA3033984      |   |                                                                                                                                                        |
|                      |         |                    | CN106488249    |   |                                                                                                                                                        |
|                      |         |                    | CN106713931    |   |                                                                                                                                                        |
|                      |         |                    | JP6071922      |   |                                                                                                                                                        |
|                      |         |                    | JP6312787      |   |                                                                                                                                                        |
|                      |         |                    | KR101723282    |   |                                                                                                                                                        |
|                      |         |                    | KR101829594    |   |                                                                                                                                                        |
|                      |         |                    | KR101914018    |   |                                                                                                                                                        |
|                      |         |                    | KR102013093    |   |                                                                                                                                                        |
|                      |         |                    | RU2680199      |   |                                                                                                                                                        |
|                      |         |                    | RU2706179      |   |                                                                                                                                                        |
|                      |         |                    | SG10201701439W |   |                                                                                                                                                        |
|                      |         |                    | SG10201707379S |   |                                                                                                                                                        |
|                      |         |                    | TWI581622      |   |                                                                                                                                                        |
|                      |         |                    | US9894375      |   |                                                                                                                                                        |
|                      |         |                    | US9900612      |   |                                                                                                                                                        |

## VP9 Expired Patent List

| Company                | VP9 Family | .                  | Pat.Nr           | Claim | Illustrative section(s) of the VP9 specification                                                                                                                                                                                                          |
|------------------------|------------|--------------------|------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB | VP9-001    | Exemplary Patent/s | CA2406459        | 18    | 2.3, 2.16, 2.17, 2.19, 2.20, 2.22, 2.25, 2.26, 2.27, 2.41, 2.42, 2.43, 2.51, 2.52,5.5, 8.5, 8.5.2, 8.5.2.4                                                                                                                                                |
|                        |            |                    | US6728317        | 2     | 2.3, 2.16, 2.17, 2.19, 2.20, 2.22, 2.25, 2.26, 2.27, 2.41, 2.42, 2.43, 2.51, 2.52,5.5, 8.5, 8.5.2, 8.5.2.4                                                                                                                                                |
|                        | VP9-003    | Exemplary Patent/s | US8576907        | 19    | 2.5, 2.10, 2.16, 2.17, 2.22, 2.45, 2.46, 2.52, 2.61, 2.62, 4.7, 6.2, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                      |
|                        |            |                    | US8594188        | 21    | 1, 2.5, 2.10, 2.16, 2.17, 2.22, 2.37, 2.38, 2.45, 2.46, 2.52, 2.57, 2.60, 2.61, 2.62, 4.6, 5.3, 5.6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 6.4.24, 6.4.26, 7, 7.1, 7.2.9, 7.4.3, 8.6, 8.6.1, 8.6.2                                   |
|                        |            |                    | US9667957        | 1     | 1, 2.1, 2.3, 2.5, 2.10, 2.14, 2.16, 2.17, 2.18, 2.22, 2.36, 2.45, 2.46, 2.59, 2.61, 2.62, 5.20, 5.26, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4.24, 6.4.26, 7.1, 7.2.9, 7.4.16, 7.4.17, 8.1, 8.6, 8.6.1, 8.6.2, B.1, B.4                                            |
|                        |            | Family members     | US10264256       |       |                                                                                                                                                                                                                                                           |
|                        | VP9-004    | Exemplary Patent/s | BNRE/R/2013/0091 | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | CN1250003        | 1     | 2, 4.9.2, 5.1, 5.5, 6.2.9, 6.2.10, 7.2, 7.2.9, 8.6.1                                                                                                                                                                                                      |
|                        |            |                    | EP2239943 (DE)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (ES)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (FI)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (FR)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (GB)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (IT)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (NL)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (SE)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (SK)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | EP2239943 (TR)   | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | HK1148152        | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | IN288863         | 1     | 1, 2, 4.9.2, 5.1, 5.5, 6.2.9, 6.2.10, 7.2, 7.2.9, 8.6.1, 9.3.2                                                                                                                                                                                            |
|                        |            |                    | JP5178389        | 1     | 1, 2.3, 2.5, 2.9, 2.10, 2.11, 2.12, 2.16-2.20, 2.22, 2.25-2.27, 2.36-2.38, 2.41-2.43, 2.45, 2.46, 2.48, 2.49, 2.51, 2.52, 2.56, 2.57, 2.59-2.63, 4.6, 5.6, 5.12, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 7.1, 7.2.9, 8.6, 8.6.1, 8.6.2 |
|                        |            |                    | JP5506645        | 1     | 2, 4.9.2, 5.1, 5.5, 6.2.9, 6.2.10, 7.2, 7.2.9, 8.6.1                                                                                                                                                                                                      |
|                        |            |                    | JP5506903        | 5     | 2, 2.3,2.16, 2.17, 2.22, 5.19, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                            |
|                        |            |                    | JP5506904        | 1     | 2, 2.3,2.16, 2.17, 2.22, 2.45, 4.9.2, 5.19, 6.2.9, 6.2.10, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                       |
|                        |            |                    | JP5506905        | 1     | 1, 2, 4.9.2, 5.1, 5.5, 6.2.9, 6.2.10, 7.2, 7.2.9, 8.6.1, 9.3.2                                                                                                                                                                                            |
|                        |            |                    | SG10201508768W   | 1     | 2, 2.3,2.16, 2.17, 2.22, 2.45, 4.9.2, 5.19, 6.2.9, 6.2.10, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                       |
|                        |            |                    | SG193680         | 6     | 2, 5.1, 6.2.9, 7.2.9, 8.6, 8.6.1, 8.6.2                                                                                                                                                                                                                   |
|                        |            |                    | US10110908       | 5     | 1, 2.3, 2.5, 2.9, 2.10, 2.11, 2.16, 2.17, 2.22, 2.36, 2.45, 2.53, 2.59, 3, 4.6, 5.19, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.2.11, 7.2.9, 7.2.10, 8, 8.1, 8.6, 8.6.1, 8.6.2                                                                                        |
|                        |            |                    | US10158865       | 5     | 1, 2.3, 2.5, 2.9, 2.10, 2.11, 2.16, 2.17, 2.22, 2.36, 2.45, 2.53, 2.59, 3, 4.6, 4.7, 5.19, 6, 6.1, 6.2, 6.2.9, 6.2.10, 6.2.11, 7.2.9, 7.2.10, 8, 8.1, 8.6, 8.6.1, 8.6.2                                                                                   |
|                        |            |                    | US9497471        | 7     | 1, 2.3, 2.5, 2.9, 2.10, 2.11, 2.12, 2.16-2.20, 2.22, 2.25-2.27, 2.36-2.38, 2.41-2.43, 2.45, 2.46, 2.48, 2.49, 2.51, 2.52, 2.56, 2.57, 2.59-2.63, 4.6, 5.6, 5.12, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 7.1, 7.2.9, 8.6, 8.6.1, 8.6.2 |
|                        |            |                    | US9584816        | 1     | 1, 2.3, 2.5, 2.9, 2.10, 2.11, 2.16, 2.17, 2.18, 2.22, 2.36, 2.45, 2.46, 2.52, 2.56, 2.57, 2.59, 2.60, 2.63, 4.6, 5.1, 5.6, 6.1, 6.2, 6.2.9, 6.2.10, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.21, 7, 7.1, 7.2.9, 7.4.3, 8.6, 8.6.1, 8.6.2                             |
|                        |            |                    | US9986249        | 8     | 1, 2.3, 2.5, 2.9, 2.10, 2.16, 2.17, 2.22, 2.36, 2.45, 2.53, 2.59, 3, 4.6, 5.19, 6, 6.1, 6.2, 6.2.9, 6.2.10, 7.2.9, 8, 8.1, 8.6, 8.6.1, 8.6.2                                                                                                              |
|                        |            | Family members     | AU2002316676     |       |                                                                                                                                                                                                                                                           |
|                        |            |                    | AU2007203288     |       |                                                                                                                                                                                                                                                           |
|                        |            |                    | CA2452506        |       |                                                                                                                                                                                                                                                           |
|                        |            |                    | MX277175         |       |                                                                                                                                                                                                                                                           |
|                        |            |                    | SG201303747-8    |       |                                                                                                                                                                                                                                                           |
|                        |            |                    | SG2013037486     |       |                                                                                                                                                                                                                                                           |
|                        |            |                    | US9578341        |       |                                                                                                                                                                                                                                                           |

|                        |         |                    |              |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|---------|--------------------|--------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB | VP9-005 | Exemplary Patent/s | AU2014204511 | 1 | 1, 2.3, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.49, 2.55, 2.58, 4.7, 5.1, 5.10, 5.26, 6.2, 6.4.17, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.5.2, 8.9, 8.10, B.1, B.4                                                                                                                                                                                                                                                                                                                                        |
|                        |         |                    | AU2014204513 | 1 | 1, 2.3, 2.12, 2.16, 2.17, 2.22, 2.40-2.42, 2.49, 2.59, 5.10, 5.12, 6, 6.1, 6.2, 6.3.18, 6.4, 6.4.3-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 6.4.21, 6.4.26, 7.2, 7.3.6, 7.4.10-7.4.12, 8.1, 8.5.2, 8.6, 8.6.2, 8.10                                                                                                                                                                                                                                                                                |
|                        |         |                    | AU2015218514 | 1 | 1, 2.3, 2.10, 2.16, 2.17, 2.22, 2.27, 2.49, 2.58, 4.7, 5.10, 5.26, 6.2, 6.4.17, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.5.2, 8.9, 8.10, B.1, B.4                                                                                                                                                                                                                                                                                                                                                         |
|                        |         |                    | IN310087     | 1 | 2.2, 2.5, 2.10, 2.12, 2.15, 2.17, 2.22, 2.24, 2.25, 2.26, 2.27, 2.39, 2.42, 2.43, 2.49, 2.52, 2.53, 3, 5.5, 5.10, 5.12, 6.2, 6.3.12, 6.3.18, 6.4.4, 6.4.17, 6.4.20, 7.2, 7.4.12, 7.4.14, 8.1, 8.5, 8.5.2, 8.5.2.3, 8.5.2.4, 8.10                                                                                                                                                                                                                                                                 |
|                        |         |                    | MY-170517-A  | 1 | 1, 2.3, 2.12, 2.16, 2.17, 2.22, 2.40-2.42, 2.49, 2.59, 5.10, 5.12, 6, 6.1, 6.2, 6.3.18, 6.4, 6.4.3-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 6.4.21, 6.4.26, 7.2, 7.3.6, 7.4.10-7.4.12, 8.1, 8.5.2, 8.6, 8.6.2, 8.10                                                                                                                                                                                                                                                                                |
|                        |         |                    | US10080035   | 1 | 1, 2.3, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.49, 2.58, 4.7, 5.10, 5.26, 6.2, 6.4.17, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.5.2, 8.9, 8.10, B.1, B.4                                                                                                                                                                                                                                                                                                                                                   |
|                        |         |                    | US8559513    | 1 | 1, 2.3, 2.12, 2.16, 2.17, 2.22, 2.40-2.42, 2.49, 2.59, 5.10, 5.12, 6, 6.1, 6.2, 6.3.18, 6.4, 6.4.3-6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 6.4.21, 6.4.26, 7.2, 7.3.6, 7.4.10-7.4.12, 8.1, 8.5.2, 8.6, 8.6.2, 8.10                                                                                                                                                                                                                                                                                |
|                        |         |                    | US8699572    | 1 | 1, 2.3, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.49, 2.55, 2.58, 4.7, 5.1, 5.10, 5.26, 6.2, 6.4.17, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.5.2, 8.9, 8.10, B.1, B.4                                                                                                                                                                                                                                                                                                                                        |
|                        |         |                    | US8761257    | 1 | 1, 2.3, 2.10, 2.16, 2.17, 2.22, 2.27, 2.49, 2.58, 4.7, 5.10, 5.26, 6.2, 6.4.17, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.5.2, 8.9, 8.10, B.1, B.4                                                                                                                                                                                                                                                                                                                                                         |
|                        |         |                    | US8942285    | 1 | 2.2, 2.5, 2.10, 2.12, 2.15, 2.17, 2.22, 2.24, 2.25, 2.26, 2.27, 2.39, 2.42, 2.43, 2.49, 2.52, 2.53, 3, 5.5, 5.10, 5.12, 6.2, 6.3.12, 6.3.18, 6.4.4, 6.4.17, 6.4.20, 7.2, 7.4.12, 7.4.14, 8.1, 8.5, 8.5.2, 8.5.2.3, 8.5.2.4, 8.10                                                                                                                                                                                                                                                                 |
|                        | VP9-006 | Exemplary Patent/s | AU2013200690 | 1 | 2, 2.1, 2.2, 2.3, 2.5, 2.10, 2.11, 2.12, 2.14, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.37, 2.38, 2.39, 2.41, 2.42, 2.43, 2.49, 2.51, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 2.61, 2.62, 5.1, 5.6, 5.12, 5.13, 6.3, 6.3.12, 6.3.13, 6.3.16, 6.3.17, 6.3.18, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.23, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.8, 6.5.10, 6.5.11, 6.5.12, 6.5.14, 7.3.6, 7.4.1, 7.4.3, 7.4.12, 7.4.13, 7.4.14, 8.5, 8.5.2, 8.5.2.1 |
|                        |         |                    | AU2013206639 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.7, 5.6, 6.3, 6.4.3, 6.4.4, 6.4.21, 6.4.23, 7.3.1, 7.4.3, 7.4.4, 8, 8.5, 8.5.2, 8.5.2.1, 8.6.2, 10.2                                                                                                                                                                                                                                                                                                 |
|                        |         |                    | AU2015218509 | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.7, 5.6, 6.4.3, 6.4.21, 6.4.23, 7.4.3, 8, 8.5, 8.5.2, 8.5.2.1                                                                                                                                                                                                                                                                                                                                        |
|                        |         |                    | AU2018200702 | 1 | 1, 2.3, 2.5, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.58, 2.59, 5.5, 5.6, 5.26, 6.2, 6.2.7, 6.3.12, 6.4.3, 6.4.4, 6.4.16, 6.4.17, 6.4.21, 6.4.23, 7.1, 7.2.7, 7.3.6, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.12, 8, 8.1, 8.5, 8.5.2, 8.5.2.1, 10.2, B.1, B.4                                                                                                                                                                                                           |
|                        |         |                    | MY-162999-A  | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.7, 5.6, 6.3, 6.4.3, 6.4.4, 6.4.21, 6.4.23, 7.3.1, 7.4.3, 7.4.4, 8, 8.5, 8.5.2, 8.5.2.1, 8.6.2, 10.2                                                                                                                                                                                                                                                                                                 |
|                        |         |                    | MY-171283-A  | 1 | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.7, 5.6, 6.4.3, 6.4.21, 6.4.23, 7.4.3, 8, 8.5, 8.5.2, 8.5.2.1                                                                                                                                                                                                                                                                                                                                        |
|                        |         |                    | US8379720    | 1 | 2, 2.1, 2.2, 2.3, 2.5, 2.10, 2.11, 2.12, 2.14, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.37, 2.38, 2.39, 2.41, 2.42, 2.43, 2.49, 2.51, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 2.61, 2.62, 5.1, 5.6, 5.12, 5.13, 6.3, 6.3.12, 6.3.13, 6.3.16, 6.3.17, 6.3.18, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.23, 6.5, 6.5.1, 6.5.6, 6.5.7, 6.5.8, 6.5.10, 6.5.11, 6.5.12, 6.5.14, 7.3.6, 7.4.1, 7.4.3, 7.4.12, 7.4.13, 7.4.14, 8.5, 8.5.2, 8.5.2.1 |

|                               |                |                    |                       |    |                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|----------------|--------------------|-----------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dolby International AB</b> | <b>VP9-006</b> | Exemplary Patent/s | <b>US8526496</b>      | 1  | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.7, 5.6, 6.3, 6.4.3, 6.4.4, 6.4.21, 6.4.23, 7.3.1, 7.4.3, 7.4.4, 8, 8.5, 8.5.2, 8.5.2.1, 8.6.2, 10.2                                                                                                                   |
|                               |                |                    | <b>US8542738</b>      | 1  | 1, 2.3, 2.5, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 2.60, 4.7, 5.6, 6.4.3, 6.4.21, 6.4.23, 7.4.3, 8, 8.5, 8.5.2, 8.5.2.1                                                                                                                                                          |
|                               |                |                    | <b>US8737472</b>      | 1  | 1, 2.3, 2.5, 2.10, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.59, 4.7, 5.5, 5.6, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.20, 6.4.21, 6.4.23, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.4.3, 7.4.13, 7.4.14, 8, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.5.2.2, 8.5.2.3, 8.5.2.4, 8.6.2 |
|                               |                |                    | <b>US8873632</b>      | 1  | 1, 2.3, 2.5, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.58, 2.59, 4.7, 5.5, 5.6, 6.2.7, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.18, 6.4.19, 6.4.21, 6.4.23, 6.5.1, 6.5.6, 6.5.7, 6.5.10, 6.5.11, 6.5.12, 7.2.7, 7.4.3, 7.4.11, 7.4.13, 8, 8.1, 8.5, 8.5.2                          |
|                               |                |                    | <b>US9549201</b>      | 1  | 1, 2.3, 2.5, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.39, 2.49, 2.52, 2.53, 2.56, 2.57, 2.58, 2.59, 5.5, 5.6, 5.26, 6.2, 6.2.7, 6.3.12, 6.4.3, 6.4.4, 6.4.16, 6.4.17, 6.4.21, 6.4.23, 7.1, 7.2.7, 7.3.6, 7.4.3, 7.4.4, 7.4.9, 7.4.11, 7.4.12, 8, 8.1, 8.5, 8.5.2, 8.5.2.1, 10.2, B.1, B.4                             |
|                               |                |                    | <b>US9571855</b>      | 1  | 1, 2.3, 2.5, 2.10, 2.12, 2.16, 2.17, 2.22, 2.27, 2.49, 2.52, 2.53, 2.56, 2.57, 2.58, 2.59, 5.26, 5.5, 5.6, 6.2, 6.2.7, 6.3.12, 6.4.3, 6.4.4, 6.4.13, 6.4.16, 6.4.17, 6.4.21, 6.4.23, 7.1, 7.2.7, 7.3.6, 7.4.3, 7.4.4, 7.4.11, 7.4.12, 8, 8.1, 8.5, 8.5.2, 8.5.2.1, 10.2, B.1, B.4                                  |
|                               | <b>VP9-007</b> | Exemplary Patent/s | <b>AU2014268171</b>   | 1  | s 1, 2, 2.1, 2.2, 2.24, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 5, 5.4, 5.5, 5.10, 5.11, 5.12, 5.25, 7, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.2, 8.5, 8.5.2, 8.5.2.4                                                                                                                                                         |
|                               |                |                    | <b>US8767829</b>      | 1  | s 1, 2, 2.1, 2.2, 2.24, 2.25, 2.26, 2.27, 2.28, 2.29, 2.31, 5, 5.4, 5.5, 5.10, 5.11, 5.12, 5.25, 7, 7.1, 7.2, 7.3.6, 7.4.12, 8.1, 8.2, 8.5, 8.5.2, 8.5.2.4                                                                                                                                                         |
|                               |                |                    | <b>US8995528</b>      | 9  | 1, 2.3, 2.5, 2.16, 2.17, 2.26, 2.27, 2.49, 6.2, 6.4.4, 6.4.5, 6.4.11, 6.4.16, 6.4.17, 7.2, 7.3.6, 7.4.12, 8, 8.1, 8.5.2, 8.5.2.4                                                                                                                                                                                   |
|                               | <b>VP9-009</b> | Exemplary Patent/s | <b>US6507618</b>      | 13 | 2.3, 2.19, 2.20, 2.22, 2.28, 2.29, 2.31, 2.41, 2.42, 2.52, 2.54, 2.56, 2.57, 2.60, 5.1, 5.6, 5.14, 6.1, 6.2, 6.2.13, 6.2.14, 6.4, 6.4.2, 6.4.3, 6.4.4, 7.1, 7.2, 7.2.11, 7.4.1, 7.4.2, 7.4.3, 7.4.4                                                                                                                |
|                               |                |                    |                       |    |                                                                                                                                                                                                                                                                                                                    |
|                               | <b>VP9-012</b> | Exemplary Patent/s | <b>CN100542042</b>    | 1  | 1, 2, 8.5.2, 8.6, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                         |
|                               |                |                    | <b>EP1500197 (DE)</b> | 1  | 8.5.2, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                    |
|                               |                |                    | <b>EP1500197 (ES)</b> | 1  | 8.5.2, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                    |
|                               |                |                    | <b>EP1500197 (FR)</b> | 1  | 8.5.2, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                    |
|                               |                |                    | <b>EP1500197 (GB)</b> | 1  | 8.5.2, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                    |
|                               |                |                    | <b>EP1500197 (IT)</b> | 1  | 8.5.2, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                    |
|                               |                |                    | <b>EP1500197 (TR)</b> | 1  | 8.5.2, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                    |
|                               |                |                    | <b>IN259767</b>       | 17 | 1, 2.3, 2.5, 2.9, 2.10, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.35, 2.41, 2.42, 2.43, 2.48, 2.51, 2.52, 2.59, 2.61, 2.62, 8.5, 8.5.2, 8.6.2, 8.7, 8.7.2, 8.8, 8.8.1, 8.8.2, 8.8.4, 8.8.5, 8.8.5.1                                                                                                              |
|                               |                |                    | <b>JP4886985</b>      | 1  | 1, 2, 8.5.2, 8.6, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.5, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                  |
|                               |                |                    | <b>KR100988984</b>    | 17 | 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.5, 8.8.5.1, 8.8.5.2                                                                                                                                                                                                                                                                  |
|                               |                |                    | <b>MX249051</b>       | 17 | 1, 2.3, 2.5, 2.9, 2.10, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.35, 2.41, 2.42, 2.43, 2.48, 2.51, 2.52, 2.59, 2.61, 2.62, 8.5, 8.5.2, 8.6.2, 8.7, 8.7.2, 8.8, 8.8.1, 8.8.2, 8.8.4, 8.8.5, 8.8.5.1                                                                                                              |
|                               |                |                    | <b>MY-135724-A</b>    | 17 | 1, 2.3, 2.5, 2.9, 2.10, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.35, 2.41, 2.42, 2.43, 2.48, 2.51, 2.52, 2.59, 2.61, 2.62, 8.5, 8.5.2, 8.6.2, 8.7, 8.7.2, 8.8, 8.8.1, 8.8.2, 8.8.4, 8.8.5, 8.8.5.1                                                                                                              |
|                               |                |                    | <b>TH41839</b>        | 17 | 1, 2.3, 2.5, 2.9, 2.10, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.35, 2.41, 2.42, 2.43, 2.48, 2.51, 2.52, 2.59, 2.61, 2.62, 8.5, 8.5.2, 8.6.2, 8.7, 8.7.2, 8.8, 8.8.1, 8.8.2, 8.8.4, 8.8.5, 8.8.5.1                                                                                                              |

|                        |         |                    |                |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------|---------|--------------------|----------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB | VP9-012 | Exemplary Patent/s | US7319415      | 17 | 1, 2.3, 2.5, 2.9, 2.10, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.35, 2.41, 2.42, 2.43, 2.48, 2.51, 2.52, 2.59, 2.61, 2.62, 8.5, 8.5.2, 8.6.2, 8.7, 8.7.2, 8.8, 8.8.1, 8.8.2, 8.8.4, 8.8.5, 8.8.5.1                                                                                                                                                                                                                                                                                                                     |
|                        | VP9-013 | Exemplary Patent/s | JP3688248      | 3  | 1, 2, 7.2.10, 8, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4120989      | 2  | 2, 7.2.10, 8, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                        |         |                    | JP4666411      | 2  | 2, 7.2.10, 8, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                        |         |                    | JP4723026      | 1  | 1, 2, 4.7, 7.2.10, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2, 9.2                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                        |         |                    | JP4723027      | 1  | 1, 2, 4.7, 7, 7.2.10, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2, 9.2                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        |         |                    | US7352812      | 1  | 1, 2.5, 2.17, 2.22, 2.27, 2.29, 2.30, 2.35, 2.39, 2.41, 2.42, 2.48, 2.49, 2.51, 2.52, 5.23, 5.24, 6.1, 6.2, 6.2.3, 6.2.6, 6.2.8, 6.2.13, 6.2.14, 6.3, 6.3.1, 6.3.12, 6.3.18, 6.4, 6.4.2-6.4.6, 6.4.8, 6.4.10, 6.4.13, 6.4.15-6.4.19, 6.4.21-6.4.24, 6.5, 6.5.1, 6.5.6, 6.5.10-6.5.12, 7.2, 7.2.3, 7.2.5, 7.2.6, 7.2.8, 7.2.11, 7.3, 7.3.1, 7.3.6, 7.4.1, 7.4.3-7.4.5, 7.4.7-7.4.13, 7.4.15, 7.4.16, 8.1, 8.5, 8.5.2, 8.5.2.1, 8.5.2.4, 8.6, 8.6.1, 8.6.2, 8.7.2, 8.8, 8.8.1, 8.8.2, 8.8.3, 8.8.4, 8.8.5, 8.8.5.1, 8.8.5.2 |
|                        |         |                    | USRE43628      | 12 | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.49, 4.7, 6.4.16, 7.2.10, 7.4.7, 8, 8.1, 8.5.2, 8.5.2.3, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                        |         |                    | USRE44497      | 19 | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.49, 2.51, 3, 7.2.10, 7.4.7, 8, 8.1, 8.5.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.8, 8.8.2, 8.10                                                                                                                                                                                                                                                                                                                                                                                                   |
|                        |         |                    | USRE46482      | 19 | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.49, 2.51, 7.2.10, 7.4.7, 8, 8.1, 8.5.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                            |
|                        |         |                    | USRE47202      | 18 | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.49, 2.51, 7.2.10, 7.4.7, 8, 8.1, 8.5.2, 8.5.2.3, 8.5.2.4, 8.6.2, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                            |
|                        |         | Family members     | EP1727373 (DE) |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | EP1727373 (FR) |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | EP1727373 (GB) |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | EP2278815 (DE) |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | EP2278815 (FR) |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | EP2278815 (GB) |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | HK1134615      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | HK1149663      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | HK1149664      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | HK1153596      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP3714944      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4565010      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4666413      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4666414      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4666415      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4717136      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4717137      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4717138      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4723024      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | JP4723025      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | US7929610      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        |         |                    | USRE45250      |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                        | VP9-014 | Exemplary Patent/s | CA2989854      | 1  | 1, 2.3, 2.5, 2.10, 2.15, 2.17, 2.18, 2.22, 2.25, 2.26, 2.27, 2.35, 2.39, 2.46, 2.49, 2.52, 2.53, 2.54, 2.59, 2.61, 2.62, 3, 6.2, 6.2.11, 6.4.4, 6.4.6, 6.4.8, 6.4.9, 6.4.11, 7.2.10, 7.4.7, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.8, 8.8.2                                                                                                                                                                                                                                                                                     |
|                        |         |                    | CA2989883      | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.10                                                                                                                                                                                                                                                                                                                                                                                              |
|                        |         |                    | CA3001216      | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.46, 2.49, 5.1, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.9, 8.10                                                                                                                                                                                                                                                                                                                                                                                    |
|                        |         |                    | CA3001227      | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.8.4, 8.8.5, 8.8.5.2                                                                                                                                                                                                                                                                                                                                                                |
|                        |         |                    | CA3011301      | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.8.4, 8.8.5                                                                                                                                                                                                                                                                                                                                                                         |
|                        |         |                    | CN1311691      | 3  | 1, 2, 5.5, 5.15, 5.23, 5.24, 7.2.8, 7.2.10, 7.4.7, 7.4.9, 7.4.12, 7.4.13, 8.1, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                        |         |                    | HK1070223      | 3  | 1, 2, 5.5, 5.15, 5.23, 5.24, 7.2.8, 7.2.10, 7.4.7, 7.4.9, 7.4.12, 7.4.13, 8.1, 8.8, 8.8.2                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                        |         |                    |                    |    |                                                                                                                                                                                                                                       |
|------------------------|---------|--------------------|--------------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB | VP9-014 | Exemplary Patent/s | JP4372197          | 2  | 2, 7.2.10, 8, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2                                                                                                                                                                          |
|                        |         |                    | JP4672065          | 1  | 2, 7, 7.2, 7.4.7, 8, 8.1, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.7.1.3, 8.8, 8.8.2, 8.8.4, 8.8.5                                                                                                                                       |
|                        |         |                    | JP4672074          | 2  | 2, 7.2.10, 8, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2, 8.8.4, 8.8.5                                                                                                                                                            |
|                        |         |                    | JP4672077          | 1  | 2, 7, 7.2, 7.4.7, 8, 8.1, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.7.1.3, 8.8, 8.8.2, 8.8.4, 8.8.5                                                                                                                                       |
|                        |         |                    | JP4672078          | 2  | 2, 7.2.10, 8, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.7, 8.8, 8.8.2                                                                                                                                                                          |
|                        |         |                    | KR10612785         | 5  | 2.16, 2.17, 2.39, 2.49, 3, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 7.2.10, 7.4.12, 7.4.13, 8, 8.1, 8.8, 8.8.2                                                                                             |
|                        |         |                    | KR10785588         | 11 | 2.16, 2.17, 2.39, 3, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.16, 6.4.18, 7.2.10, 7.4.13, 8, 8.1, 8.8, 8.8.2                                                                                                                   |
|                        |         |                    | KR10785589         | 10 | 2.27, 2.39, 2.49, 3, 6.2.11, 6.4.4, 6.4.5, 6.4.8, 6.4.9, 6.4.11, 6.4.16, 6.4.17, 6.4.18, 7.2.10, 7.4.12, 7.4.13, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2                                                                                      |
|                        |         |                    | US10178386         | 1  | 1, 2.3, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.10                                                                                        |
|                        |         |                    | US10257511         | 1  | 1, 2.3, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.10                                                                                        |
|                        |         |                    | US9344730          | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.8.4, 8.8.5                                                                                     |
|                        |         |                    | US9407913          | 1  | 1, 2.3, 2.5, 2.10, 2.15, 2.17, 2.18, 2.22, 2.25, 2.26, 2.27, 2.35, 2.39, 2.46, 2.49, 2.52, 2.53, 2.54, 2.59, 2.61, 2.62, 3, 6.2, 6.2.11, 6.4.4, 6.4.6, 6.4.8, 6.4.9, 6.4.11, 7.2.10, 7.4.7, 8.5, 8.5.2, 8.6, 8.6.1, 8.6.2, 8.8, 8.8.2 |
|                        |         |                    | US9407914          | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.10                                                                                                          |
|                        |         |                    | US9503759          | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.8.4, 8.8.5                                                                                     |
|                        |         |                    | US9866834          | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.46, 2.49, 5.1, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.9, 8.10                                                                                                |
|                        |         |                    | US9872024          | 1  | 1, 2.16, 2.17, 2.27, 2.35, 2.39, 2.46, 2.49, 6.4.21, 6.4.24, 7.2.10, 7.4.7, 7.4.15, 7.4.16, 8, 8.1, 8.5.2, 8.6.2, 8.7.2, 8.8, 8.8.2, 8.8.4, 8.8.5, 8.8.5.2                                                                            |
|                        |         | Family members     | CA2454867          |    |                                                                                                                                                                                                                                       |
|                        |         |                    | CA2616751          |    |                                                                                                                                                                                                                                       |
|                        |         |                    | CA2706895          |    |                                                                                                                                                                                                                                       |
|                        |         |                    | CNZL200510116499.3 |    |                                                                                                                                                                                                                                       |
|                        |         |                    | CNZL200710087609.7 |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (AT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (BE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (DE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (ES)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (FR)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (GB)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (IE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (IT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (NL)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (PT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (SE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1425922 (TR)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (AT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (BE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (DE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (ES)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (FR)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (GB)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (IE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (IT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (NL)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (PT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (SE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1562384 (TR)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1838107 (AT)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1838107 (BE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1838107 (DE)     |    |                                                                                                                                                                                                                                       |
|                        |         |                    | EP1838107 (ES)     |    |                                                                                                                                                                                                                                       |

|                        |         |                    |                |   |                                                                                                                                                                                                  |
|------------------------|---------|--------------------|----------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB | VP9-014 | Family members     | EP1838107 (FR) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (GB) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (IE) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (IT) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (NL) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (PT) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (SE) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP1838107 (TR) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (AT) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (BE) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (DE) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (ES) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (FR) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (GB) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (IE) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (IT) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (NL) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (PT) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (SE) |   |                                                                                                                                                                                                  |
|                        |         |                    | EP2259596 (TR) |   |                                                                                                                                                                                                  |
|                        |         |                    | HK1106376      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP3688283      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP3688288      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP4094019      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP4372019      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP4723022      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP4723023      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP5216070      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP5216071      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP5222343      |   |                                                                                                                                                                                                  |
|                        |         |                    | JP5346908      |   |                                                                                                                                                                                                  |
|                        |         |                    | KR10751670     |   |                                                                                                                                                                                                  |
|                        |         |                    | US7450641      |   |                                                                                                                                                                                                  |
|                        |         |                    | US7613240      |   |                                                                                                                                                                                                  |
|                        |         |                    | US7787542      |   |                                                                                                                                                                                                  |
|                        |         |                    | US7907667      |   |                                                                                                                                                                                                  |
|                        |         |                    | US8040957      |   |                                                                                                                                                                                                  |
|                        |         |                    | US8798173      |   |                                                                                                                                                                                                  |
|                        |         |                    | US8891634      |   |                                                                                                                                                                                                  |
|                        |         |                    | US9124888      |   |                                                                                                                                                                                                  |
|                        | VP9-015 | Exemplary Patent/s | AU2002316666   | 1 | 2.12, 2.22, 2.26, 2.27, 2.29, 2.31, 2.52, 2.53, 4.6, 5.12, 6.1, 6.2, 6.3, 6.3.12, 6.3.18, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 7.2, 7.3.6, 7.4.9, 7.4.12, 8.5, 8.5.2 |
|                        |         |                    | MY-154424-A    | 1 | 2.12, 2.22, 2.26, 2.27, 2.29, 2.31, 2.52, 2.53, 4.6, 5.12, 6.1, 6.2, 6.3, 6.3.12, 6.3.18, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 7.2, 7.3.6, 7.4.9, 7.4.12, 8.5, 8.5.2 |
|                        |         |                    | SG102730       | 1 | 2.12, 2.22, 2.26, 2.27, 2.29, 2.31, 2.52, 2.53, 4.6, 5.12, 6.1, 6.2, 6.3, 6.3.12, 6.3.18, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 7.2, 7.3.6, 7.4.9, 7.4.12, 8.5, 8.5.2 |
|                        |         |                    | US6816552      | 1 | 2.12, 2.22, 2.26, 2.27, 2.29, 2.31, 2.52, 2.53, 4.6, 5.12, 6.1, 6.2, 6.3, 6.3.12, 6.3.18, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.11, 6.4.13, 6.4.16, 6.4.17, 7.2, 7.3.6, 7.4.9, 7.4.12, 8.5, 8.5.2 |
|                        |         | Family members     | CA2452504      |   |                                                                                                                                                                                                  |
|                        |         |                    | CN100373791    |   |                                                                                                                                                                                                  |
|                        |         |                    | JP4339680      |   |                                                                                                                                                                                                  |
|                        |         | Exemplary Patent/s | US10499058     | 1 | 1, 2.3, 2.10, 2.16, 2.17, 2.45, 2.46, 2.58, 4.6, 4.7, 5.10, 5.26, 6.2, 6.2.2, 6.4.21, 6.4.24, 7.1, 7.2, 7.2.2, 7.4.16, 8.1, 8.6, 8.6.1, 8.6.2, B.1                                               |
|                        |         |                    | US10728554     | 1 | 1, 2.3, 2.16, 2.17, 2.45, 2.46, 4.6, 6.2, 6.2.2, 6.4.21, 6.4.24, 7.2, 7.2.2, 7.4.16, 8, 8.1, 8.6, 8.6.1, 8.6.2                                                                                   |
|                        |         |                    | US10951893     | 1 | 1, 2.3, 2.16, 2.17, 2.45, 2.46, 4.6, 6.2, 6.2.2, 6.4.21, 6.4.24, 7.2, 7.2.2, 7.4.16, 8, 8.1, 8.6, 8.6.1, 8.6.2                                                                                   |
|                        |         |                    | US11812020     | 3 | 1, 2.3, 2.10, 2.16, 2.17, 2.45, 2.46, 2.58, 4.6, 4.7, 5.10, 5.26, 6.2, 6.2.2, 6.4.21, 6.4.24, 7.1, 7.2, 7.2.2, 7.4.16, 8, 8.1, 8.6, 8.6.1, 8.6.2, B.1                                            |
|                        |         | Family members     | US9294771      |   |                                                                                                                                                                                                  |

|                         |         |                    |                |   |                                                                                                                                                                                                                                                     |
|-------------------------|---------|--------------------|----------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dolby International AB  | VP9-011 | Exemplary Patent/s | TWI268714      | 2 | 2.3, 2.5, 2.16, 2.17, 2.22, 2.25, 2.26, 2.27, 2.32, 2.52, 2.53, 2.57, 2.59, 2.61, 2.62, 6.1, 6.2, 6.4, 6.4.2, 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.10, 6.4.11, 6.4.13, 6.4.21, 7.2, 7.4.3, 7.4.4, 7.4.8, 7.4.9, 8.5, 8.5.2, 8.6, 8.6.2, 8.7, 8.7.2, 10.2 |
|                         |         |                    |                |   |                                                                                                                                                                                                                                                     |
| Godo Kaisha IP Bridge 1 | VP9-046 | Exemplary Patent/s | CN101035291    | 1 | 1, 2, 3, 5.10, 5.15, 5.25, 6.2, 6.2.11, 6.4.4, 6.4.9, 6.4.16, 6.4.17, 7.4.12, 8.5.2, 8.5.2.4                                                                                                                                                        |
|                         |         |                    | CN1312936      | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, and 8.3.1.                                                                                           |
|                         |         |                    | EP1739972 (AT) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (BE) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (CH) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (CZ) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (DE) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (ES) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (FR) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (GB) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (HU) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (IT) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (LI) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (MC) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (NL) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (RO) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1739972 (SE) | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, 8.3.1                                                                                                |
|                         |         |                    | EP1742481 (DE) | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | EP1742481 (ES) | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | EP1742481 (FR) | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | EP1742481 (GB) | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | EP1742481 (IT) | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | EP1742481 (NL) | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | JP4722153      | 1 | 2, 3, 5.1, 5.5, 5.10, 5.15, 6.4.16, 6.4.17, 8.5.2, 8.5.2.4                                                                                                                                                                                          |
|                         |         |                    | KR100944851    | 1 | 1, 2, 3, 4.10.1-4.10.10, 5.9.2, 5.9.14, 5.10, 5.11.1, 5.11.2, 5.11.4, 5.11.5, 5.11.23, 5.11.25, 6.8.13, 6.10.24, 7.11.1, 7.11.3.1, 8.1, 8.2.1, and 8.3.1.                                                                                           |
|                         |         |                    | KR100944852    | 1 | 2.25, 2.26, 2.27, 2.49, 2.54, 3, 6.2.11, 6.4.9, 6.4.17, 7.2.10, 7.4.12, 8.5.2, 8.5.4, 8.6.2                                                                                                                                                         |
|                         |         | Family members     | CN100581260    |   |                                                                                                                                                                                                                                                     |
|                         |         |                    | CN101035290    |   |                                                                                                                                                                                                                                                     |
|                         |         |                    | EP1450565 (DE) |   |                                                                                                                                                                                                                                                     |
|                         |         |                    | EP1450565 (ES) |   |                                                                                                                                                                                                                                                     |
|                         |         |                    | EP1450565 (FR) |   |                                                                                                                                                                                                                                                     |
|                         |         |                    | EP1450565 (GB) |   |                                                                                                                                                                                                                                                     |
|                         |         |                    | EP1450565 (IT) |   |                                                                                                                                                                                                                                                     |

|                         |         |                |                |  |  |
|-------------------------|---------|----------------|----------------|--|--|
| Godo Kaisha IP Bridge 1 | VP9-046 | Family members | EP1450565 (NL) |  |  |
|                         |         |                | EP1739973 (DE) |  |  |
|                         |         |                | EP1739973 (ES) |  |  |
|                         |         |                | EP1739973 (FR) |  |  |
|                         |         |                | EP1739973 (IT) |  |  |
|                         |         |                | EP1739973 (NL) |  |  |
|                         |         |                | JP4718578      |  |  |
|                         |         |                | JP4767991      |  |  |
|                         |         |                | KR100944853    |  |  |
|                         |         |                | KR100976672    |  |  |
|                         |         |                | US10080033     |  |  |
|                         |         |                | US9473774      |  |  |
|                         |         |                | US9473775      |  |  |
|                         |         |                | US9706224      |  |  |
|                         |         |                | US9813728      |  |  |
|                         |         |                | US9813729      |  |  |
|                         |         |                | US9998756      |  |  |

|                      |         |                    |                |   |                                                                 |
|----------------------|---------|--------------------|----------------|---|-----------------------------------------------------------------|
| Xylene Holdings S.A. | VP9-018 | Exemplary Patent/s | AU2002353749   | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | AU2007219272   | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | CA2467496      | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (AT) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (BE) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (BG) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (CH) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (CY) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (CZ) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (DE) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (DK) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (EE) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (ES) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (FI) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (FR) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (GB) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (GR) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (IE) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (IT) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (LI) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (LU) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (MC) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (NL) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (PT) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (SE) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (SK) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | EP1449383 (TR) | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | IN218194       | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |

|                      |         |                    |             |   |                                                                 |
|----------------------|---------|--------------------|-------------|---|-----------------------------------------------------------------|
| Xylene Holdings S.A. | VP9-018 | Exemplary Patent/s | KR100984612 | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | RU2307478   | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         |                    | ZA200403131 | 1 | 5.13, 6.4.16, 6.4.18, 7.4.11, 7.4.13, 8.5.2.1, 8.5.2.2, 8.5.2.3 |
|                      |         | Family members     | CN100380973 |   |                                                                 |
|                      |         |                    | JP4440640   |   |                                                                 |