

## About ETSI

dPMR is part of *ETSI* – one of the world's leading standards development organizations for Information and Communication Technologies (ICT). Founded initially to serve European needs, *ETSI* has grown rapidly to become highly-respected as a producer of technical standards for worldwide use.

*ETSI* membership is composed of manufacturers and network operators – all the “big names” and many smaller companies too – plus national administrations, ministries, regulators, universities, research groups, consultancies and user organizations. A powerful and dynamic mix of skills, resources and ambitions, all working together to bring the very best ICT solutions to the global marketplace. Geographically, our membership of over 700 companies and organizations is drawn from more than 60 countries on 5 continents.

*ETSI* is independent of all other organizations and structures, a key feature for ensuring neutrality and trustworthiness. That brings benefits not only in the acceptance of our standards and other publications, but also in our growing range of ancillary services, such as interoperability testing. And because standardization inevitably draws upon the bright ideas of our members, we have an Intellectual Property Rights (IPR) policy in place that has become the model for many other organizations.

*ETSI*'s standardization activities are open to all interested companies and organizations. Your company can be part of this dynamic organization. For more information about how *you* can be involved, please visit

<http://www.etsi.org/membership>

For details about *ETSI*'s current dPMR activities, please visit

<http://portal.etsi.org/portal/server.pt/community/ERM/306>

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## Digital Private Mobile Radio (dPMR)



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Digital Private Mobile Radio (dPMR) is a standard that has been developed by *ETSI* and defines digital Professional, Personal and Private Mobile Radio (PMR). PMR has enjoyed great success in Europe for many years, and serves a very broad community of users.

dPMR is a Frequency-Division Multiple Access (FDMA) system offering the lowest cost digital voice and data solutions for PMR. Until recently, PMR technology that used Time-Division Multiple Access (TDMA) was more spectrum-efficient at wider channel spacings such as 25kHz. The *ETSI* dPMR standard solves the problem of shortage of radio channels by introducing 6,25kHz FDMA radios with a 4FSK modulation scheme. This newly-developed narrowband 6,25kHz FDMA technology, as used by dPMR, brings greater spectrum efficiency with lower infrastructure cost.

Although the market landscape for two-way radio varies somewhat throughout the world, markets can be roughly divided into three broad categories. dPMR has the universal capability to serve them all :

- (1) Consumer (and short-range industrial)
- (2) Professional/Business-Critical applications
- (3) Public Safety/Mission-Critical applications.

dPMR is a scaleable system that can be used in unlicensed mode (in a 446,1 to 446,2 MHz band), and in licensed mode, subject to national frequency planning. It is developed in 'tiers':

- Tier 1 is the low-cost, licence-exempt 'digital PMR446', and is defined by *ETSI* Technical Specification TS 102 490.
- Tier 2 is for the licensed professional market, offering peer-to-peer mode (Mode 1), repeater mode (Mode 2) and trunked (managed access) operation (Mode 3). Tier 2 is defined by *ETSI* Technical Specification TS 102 658.

The dPMR specifications can be obtained free of charge from the *ETSI* website publications download area (<http://pda.etsi.org/pda>).



## dPMR Memorandum of Understanding Group

The high value placed in the dPMR technology by the radio industry worldwide resulted in the establishment of the 'dPMR Memorandum of Understanding Group' in 2007. Its goal is to provide a forum for all interested parties wishing to support this latest digital PMR radio technology and today sees radio manufacturers, chip manufacturers, protocol and software developers as well as systems developers working together with the common aim of ensuring the success of dPMR.

For more information visit [www.dpmr-mou.org](http://www.dpmr-mou.org)

## The importance of interoperability

Operators, vendors and manufacturers need to be assured, as early as possible in their development lifecycles, of the interoperability of their products and systems. To facilitate this assurance, *ETSI* produces test specifications that accompany the core technology standards.

The dPMR Memorandum of Understanding Group has adopted the recently-developed *ETSI* dPMR conformance and interoperability standards for the purposes of trademarking products. Members of the Group are committed to supporting the use of those standards. This is vital for true competition and interoperability among different manufacturers. As a result, users can have the highest confidence in sourcing equipment from any vendor who has received the Trade Mark from the dPMR Memorandum of Understanding Group.

The Group is active in ensuring an independent validation of interworking between dPMR products from different manufacturers and authorising the use of a specific dPMR logo for compliant equipment. These interoperability and conformance procedures are based on the *ETSI* dPMR test specification suites TS 102 587 (for Tier 1) and TS102 726 (for Tier 2). The test suites detail the requirements and procedures for any manufacturer developing a dPMR product, and allow them to determine, even during the product's development phase, whether it is compliant with the standards.

The TS102 587 documents for Tier 1 and TS102 726 documents for Tier 2 Mode 1 dPMR are complete and can be accessed free of charge via the *ETSI* publications download area (<http://pda.etsi.org/pda>). The dPMR Tier 2 Mode 2 and Mode 3 test specifications are currently in preparation, with their publication foreseen during 2010.