Fact Sheet

What is Fixed Wireless Access?

Fixed Wireless Access (FWA) is a variant of wireless broadband, where a radio link is used instead of cable or fibre for the transmission of voice and data. FWA can, for example, be used for rapid Internet access and video conferences. The communication goes from a transmitter to fixed terminals fitted, for example, on a building roof, in contrast to mobile telephony where the communication goes from a transmitter to mobile terminals.

FWA is suitable for broadband access in areas where a roll-out with fibre or other infrastructure is expensive, for example in sparsely populated areas. This is due to the fact that all users, following installation of a central base station, can get broadband access within the base station’s area of coverage. Broadband access via fibre requires a cable to be laid to each user, which also entails higher installation costs than FWA.

It is predicted that FWA will be an important component in the rollout of broadband, as the technology facilitates broadband access across large areas. Market estimates have shown that between 4 and 30 per cent of broadband connections may comprise radio-based solutions.

Different kinds of FWA systems

Point to multi-point
An FWA system comprises, in its simplest form, a transmitter and a number of receivers. The transmitter often comprises a central base station and the receiver is small equipment located with the user. Those users located within the area covered by the base station can simply be offered broadband access after receiver equipment is installed with them. This kind of system is known as point to multi-point.

Multi-point to multi-point
There are also FWA systems that have not been based on the use of a large base station. In these systems, each user

Facts about FWA
- There are two kinds of FWA system: point to multi-point, which is based on a large base station, and multi-point to multi-point, where every user equipment functions as a mini base station.

- Advantages of FWA are low installation costs, quicker and simpler installation and also the possibility of offering broadband access to large areas and many users.

More information
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This factsheet is also available of PTS’s website, www.pts.se, where there are also factsheets on other subjects.
equipment constitutes a mini base station, which communicates with other user equipment. In this way a network of user equipment is created.

New customers can be connected in proximity to the existing network. When new customers are connected, the area covered by the network increases simultaneously. This kind of system is called a mesh network or multi-point to multi-point.

**Range and capacity**

Depending upon the frequency and output capacity, the range can normally vary from a couple of kilometres up to 20 kilometres. Rapid transmission rates can be offered with FWA. FWA may therefore also from this aspect be deemed to be a good supplement to fibre and other kinds of access. With the FWA systems that are available on the market, normal transmission rates from 128 kbps up to over 20 Mbps can be offered.

**FWA licences allocated**

Information on FWA licences allocated is available on PTS's website: www.pts.se

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**About the Post and Telecom Agency**

PTS’s vision is that everyone in Sweden shall have access to efficient, affordable and secure communications services.

PTS has four overall objectives:
- Consumer interests in focus
- Efficient competition
- Efficient utilisation of resources
- Secure communications