

## **EURO 2008 – two countries – one event**

**Numerous wireless telecommunication systems were used during the UEFA European football championship EURO 2008. Team coaches, broadcasting companies and service providers as well as private and public security services made concentrated use of a great deal of radio equipment within rather small areas.**

**Thousands of licence applications have been issued prior and during the championship. The Austrian telecommunications authorities coordinated thousands of frequencies for the different radio applications in very small areas around the stadiums in Vienna, Klagenfurt, Salzburg and Innsbruck, for a period of a few hours during the matches. The most congested spectrum was that for wireless microphones (UHF band IV and V) and wireless cameras (in 2.3 GHz and 3.5 GHz bands).**

The EURO2008 was carried out under the motto “two countries - one event” in Austria and Switzerland and, from the radio communications point of view, with different legal systems, different approaches on license fees and different frequency usage. In order to coordinate the different approaches various coordination meetings of the Swiss and Austrian telecommunications Administrations resulted in common definitions, common public information policy, web presence, similar application forms and where possible, the use of the same range of frequencies for applicants operating in both countries. However the issuing of licenses was a purely national affair.

A central database (DB) for licensing was established, which turned out as a helpful tool. On this basis the frequency coordination was executed by the local radio monitoring services. All used radio equipment and the related frequencies were registered in this DB.

By the official deadline for license applications at the end of March 2008 unfortunately not more than 30% of the applications arrived at the responsible authorities; most of the license applications came in shortly before and during the events.

It turned out a great advantage that the licensed radio equipment was marked with stickers. In all stadiums an information desk of the responsible radio monitoring staff was available. All the radio equipment was checked and afterwards marked with the above mentioned sticker. Radio equipment, which was not correctly marked, could not be carried into the stadium areas. By checking the marking a great number of illegal radio equipment was removed at the stadium entrances.

### **Interference management**

In each stadium at least two teams of the radio monitoring services were present, one mainly for monitoring and the other for the investigation of reported interference cases.

The main source of interference was incorrect adjustment of radio equipment (e.g. wrong frequencies).

For example, it appeared that on a particular transmission vehicle all radio equipment was operated on non-licensed frequencies. It turned out, that this particular vehicle was placed at the wrong location (it was planned for another venue about 500 km away from the subject location).

**Some statistical facts**

14000 radio transmitters covered by more than 400 licenses

About 10000 frequencies were coordinated.

The operators of radio equipment came from different European countries as well as countries like China, New Zealand, Mauritius, Singapore and others.

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