FREQUENCIES F1 GP
MONZA, Italy 2009-2018
Sao Paulo, Brazil 2009-2017

Info of the Frequency-Coordinator of RAI WAY,
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and
Frequency-Coordinator of TV Globo,
Felipe Filgueiras Costa

Presented by Pia Seeger
• Formula One is the highest class of single-seater auto racing sanctioned by the ‘Fédération Internationale de l'Automobile’ (FIA) and owned by the Formula One Group.

• While Europe is the sport’s traditional base, the championship is truly global, with 11 of the 21 races in the 2018 season taking place outside Europe.

Source: https://en.wikipedia.org/wiki/Formula_One
Total Number of Coordinated Frequencies

This graphic shows the number of RF links, coordinated in the last years for Formula 1 in Brazil and Italy.
Typical antenna arrangement that must be installed before the production (Italy)

Typical Antenna installation:
- Paddock Broadcast antennas
- Rx radio cameras (diversity) in 3-7 GHz
- RX radiomicrophones (diversity) 470-790 MHz
- Tx video return 0.5 W in 2-3 GHz
- Tx audio return 2W in 470-790 MHz
- Intercom in 440-470 MHz
Total Number of Audio and Video PMSE

Number of audio and Video PMSE, coordinated in the last years for Formula 1
Example of intensive localized spectrum use in F1 (I)

Intensive spectrum usage for just one sub-production team;

- Microphones
- IEM
- Cameras
- Talk-Back
- Wireless display
Typical IEM Spectrum Scan at Monza F1 TV Compound (Italy)

28/08/18 no IEM

01/09/18 about 14 IEM in operation
Production teams at Formula 1

Flexible news reporting requires wireless audio and video PMSE

Italy

Brazil
Evolution of Frequencies for RF Camera

This graphic shows the changing use of frequency bands for Video PMSE at F1. Note: in Italy the 1.6 GHz band was not used by wireless cameras but was used for data links.
A variety of communication systems are built into every F1 racing car. The challenge is a secure connection at rapidly changing speeds and locations.
Pictures the visitor cannot see (Brazil)

Every production is based on a complex infrastructure that is located in the background.
A brief look in the scanning data of F1. In about 1hr, 15min 104 Audio PMSE links were scanned and recorded.

Download the presentation here:

Contact

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Information about the pictures of this presentation

All pictures were provided by;

* Dino Larry Tedesco (Italy)
  and
* Felipe Filgueiras Costa (Brazil).

Thank you very much!