
FCC TAC

Noise Subcommittee Status

December 13, 1999

Initial Sub-Committee Charter

Assess state of knowledge of the noise environment and its impact on communications

Identify man-made noise sources harmful to wireless communication

Identify noise issues that justify FCC attention / action

Suggest approaches for obtaining information

Trends

Proliferation of new wireless systems

- 2nd -> 3rd Generation Cellular**
 - 300 million subscribers now going to 1 billion in 2003**
- Public Safety**
- Fixed wireless to the home**
- Satellite systems**
- In Home wireless networks**
- WLAN / Personal area networks (Bluetooth)**

Trends (cont)

Rapid growth of electronic devices

- PCs / Laptops**
- Organizers**
- Game machines**
- Wireless internet appliances**
- Automotive electronics**
- Electronic books**
- MP3 players**
- Electronic monitors and sensors**

rends (cont)

Result

- Dramatically increased number of devices**
- New emission characteristics**
- Increasingly uneven device / radio density**
- Greater interference potential due to increased mobility**

FCC needs to review regulatory approaches on noise interference

FCC TAC Noise Sub Committee

Goals

- Ensure current communications systems are not compromised
- Maximize potential for innovative new communication technologies

Role

- Develop proposal on how to proceed
- Facilitate proposal implementation
 - Identify possible funding sources
 - Review results during implementation

Status

- Initial proposal developed - www.jacksons.net/tac/
- Possible funding approaches listed

Proposal

Develop a comprehensive report based on existing information

- **Search current literature**
- **Obtain information from industry experts**
- **Rationalize and consolidate the information**
 - **Identify and rank major noise sources**

Develop simulation tools / models to predict future issues

- **Develop noise models of major current / future sources**
- **Develop models of major communication systems**
- **Simulate to predict potential future noise environments**

Verify Simulations

Identify improved regulations

- **Develop noise models based on proposed regulatory limits**
- **Evaluate noise impact via simulation**

Funding

Rough Cost Estimates

- Develop literature based report - \$100K
- Develop noise models and perform simulation - \$600K
- Verification of simulations - not yet estimated

Possible Funding Approaches

- FCC
 - Include in fiscal 2001 budget
 - Begin work in late 2000
- Explore NTIA as an alternate source
- FCC TAC members fund
- Broader industry funding
- Other? / Combinations of the above ?