TUTORIAL (1)

Why 802 needs an Emergency Services Project and what we think it should look like.

Geoff Thompson/InterDigital
Scott Henderson/RIM
802 ES-ECSG
TUTORIAL (2)

SUPPORT OF EMERGENCY SERVICES and THEIR (present and future) REGULATORY REQUIREMENTS FOR PACKET NETWORKS IS A HUGE, COMPLEX PROBLEM FOR WHICH THE PROBLEM ITSELF IS NOT YET FULLY DEFINED.
There are pieces of the ES problem that:

- Are well defined today
- Have existing regulatory requirements
- Are not addressed across 802.
The biggest piece:

- 802 originated (and VoIP originated) “calls” to the PSTN don’t carry the information required for emergency calls (e.g. 911 calls) (There are proprietary exceptions)

- There are existing regulatory requirements for these calls that are not being met.
The IETF – ECRIT group has taken on the task of solving this problem for the upper layers. 

802 needs to work with ECRIT to provide a complete solution. 

The solution should look the same to ECRIT without regard to which 802 technology is in use.
Why VoIP doesn't work today:

• The Internet was designed to be “location neutral”.

• Traditional “911” was designed around and serviced by a localized infrastructure (end office circuit switched systems)

• VoIP services are highly decentralized and often cross national boundaries (regulatory problem)
TUTORIAL (7)

Why VoIP doesn't work today (cont'd):

- Today, the VoIP service provider has no knowledge of the callers location within the Internet (almost true)
- A PSAP has no prior knowledge that a caller is within their service area.
- Therefore associating caller and proper PSAP is a big problem
- VoIP service provider are not yet fully regulated, there are significant technical, geopolitical and legal jurisdiction problems involved.
TUTORIAL (8)

Regulatory Requirements:

- Call request directed to the correct PSAP
- Provide calling party location
- Non-subscriber access to network
- PSAP can call back
- Very high priority
- Call integrity (no drop, spoof-proof)
What does ECRIT need from 802 to meet these requirements?

- Provide better location than just the router
- Provide LOCAL connection (e.g. bypass various tunneling schemes)
- Provide service to unauthenticated user
- Provide support for callback
- Emergency calls should be given network priority
- Spoofing and security are issues
These are all problems that can be solved with technology that already exists in 802 standards.

There needs to be a uniform solution across 802.