Reliability and Security Focus Group

IEEE
COMMUNICATIONS
SOCIETY

Reliability & Security Issues for Priority Communications

1. simulating congestion in lab (includes 7)
2. emergency mobile originating call efficiency (KPI)
3. dependence of existing reliability design of existing network elements
4. identify critical infrastructure components to make redundant (includes 21)
5. determine who gets priority treatment
6. impacts for planning (capacity, new technology)
7. overload handling
8. priority on terminating end
9. how to secure priority calling from mis-use (includes 13, 20, 22)
10. training for end users
11. training for network operators for network elements
12. need for conducting exercises
13. certification of provisioning
14. interoperability with private networks
15. security of interfaces between public and private networks (including TETRA)
16. national roaming (include 19)
17. setting expectations for limits (e.g., existing coverage)
18. interworking with emergency calls (i.e. 112)
19. international roaming
20. physical security protection of database
21. redundancy of databases
22. administrative security

Specific Issues

1 Overload Simulation . . .how to test
- must define test success criteria
- requires crises congestion
- periodic tests
- when new, unrelated features come out (regression)
- crises exercises
- software fault insertion testing (SFIT)

2 Identify critical infrastructure components to make redundant
- Define avail requirements
- Define security issues
- Build w/ architecture to achieve above
- Establish procedures to ensure

3. Priority on Terminating End
- addressed by standards

Specific Issues

4. Securing P.C Against Mis-use
   - identifying intrinsic vulnerabilities
   - implement countermeasures to address
   - periodically test
   - improve countermeasures based on test results
   - measure risk of gap

5. Training (End users, Network operators personnel)
   - Manuals
   - Exercises
   - Pre-recorded messages
   - Make easy to use