Invited Talk II

Quality of Service in Integrated Networks

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Abstract
Communication Networks migrate towards an infrastructure, which ischaracterized by seamless interoperation of heterogeneous subnetworks with different protocol architectures, network technologies, and services. The user will not be aware of this heterogeneity, but relies on a secure, reliable and efficient operation supporting his applications. To provide such a quality of service, communication networks have to meet stringent quality requirements with respect to

- functions and features

- availability and reliability

- security

- real time performance

- speed and throughput.

For the individual requirements particular methodologies have been developed, such as specification, verification, implementation, modeling, simulation and testing techniques. These techniques reflect the particular needs and are only partially interrelated. Often, they are applied (if at all) sequentially and independently. The extended functionalities of future communication network infrastructures indicate a more integrated approach.
In the talk we will define the requirements of enhanced methodologies. Some examples will be given to elucidate the needs such as integrated function and performance testing of switching systems or feature interaction. FDTs may be rather useful but they are limited to closed subsystems. Integrated methodologies have to be supported by standardization, built-in capabilities and tools.

The original version of this chapter was revised: The copyright line was incorrect. This has been corrected. The Erratum to this chapter is available at DOI: 10.1007/978-0-387-35394-4_29

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