



Wireless Engineering Research and Education Center

End-to-End Service Quality and Availability Assurance in Converged Wireline & Wireless Networks

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Abstract

To ensure that emerging, converged wireline and wireless solutions deliver the end-to-end service quality and availability expected by service providers, new capabilities are required to model, measure and evaluate the robustness and effectiveness of the solutions over their lifecycles.

This talk describes the implementation of a proactive End-to-End Service Availability Support platform that meets the needs above for network technologies and services such as IMS and IPTV. Key innovations include a model that predicts end-to-end service availability & quality across an entire solution, near-real time secure collection and centralization of all available network and service data, and a data model that derives the critical end-to-end service metrics from this data. This platform enables service provider's network managers and vendors to receive early warning indications and inform network operators of impending issues or help technical assistance centers rapidly troubleshoot critical problems.

Bio

Abhaya Asthana is a Bell Labs Fellow. He is currently working in the Network Systems Application Integration Division developing architectural models and analysis methods for next-generation networks, initially focused on the IPTV application. At Bell Labs Research he did pioneering work in the areas of networked computing systems, computer architecture, multimedia and wireless systems, operating systems and VLSI design. Later he led the architecture and design of transport and network management products for Metro and Access networks and systems and the end to end solutions Design-for-Reliability. Dr. Asthana received his Bachelor's degree in Electrical Engineering from I.I.T. Kanpur in 1970 and his Ph.D. from Tulane University in 1974. He has several patents and over 100 technical publications.

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