A Testbed for Research and Development of Secure IP Multimedia Communication Services

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New services over the Internet, such as Voice over IP (VoIP) and IP-based media distribution (IPTV), are being aggressively deployed. Not only will these services reduce communication costs, but they will also pave the way for innovative, value-added, highly personalized services.

Research and Experimentation on VoIP Security Testbed
Preliminary Architecture

Multimedia services are vulnerable to threats such as unpaid service usage and service disruption.
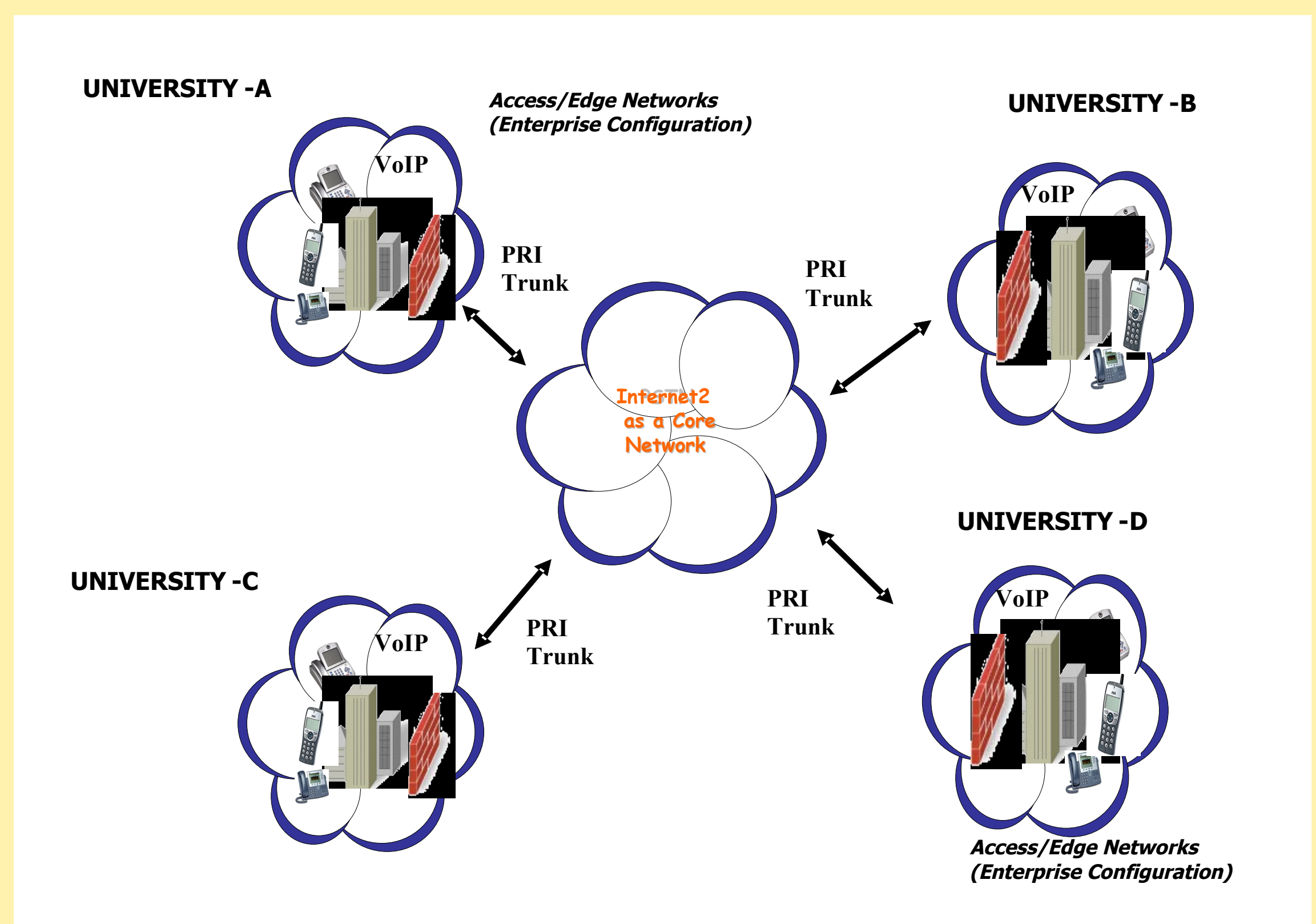
New vulnerabilities are possible due to:

♦ Convergence of the public switched telephone network and the Internet

♦ Use of separate signaling and bearer channels

♦ Strict Quality of Service (QoS) requirements
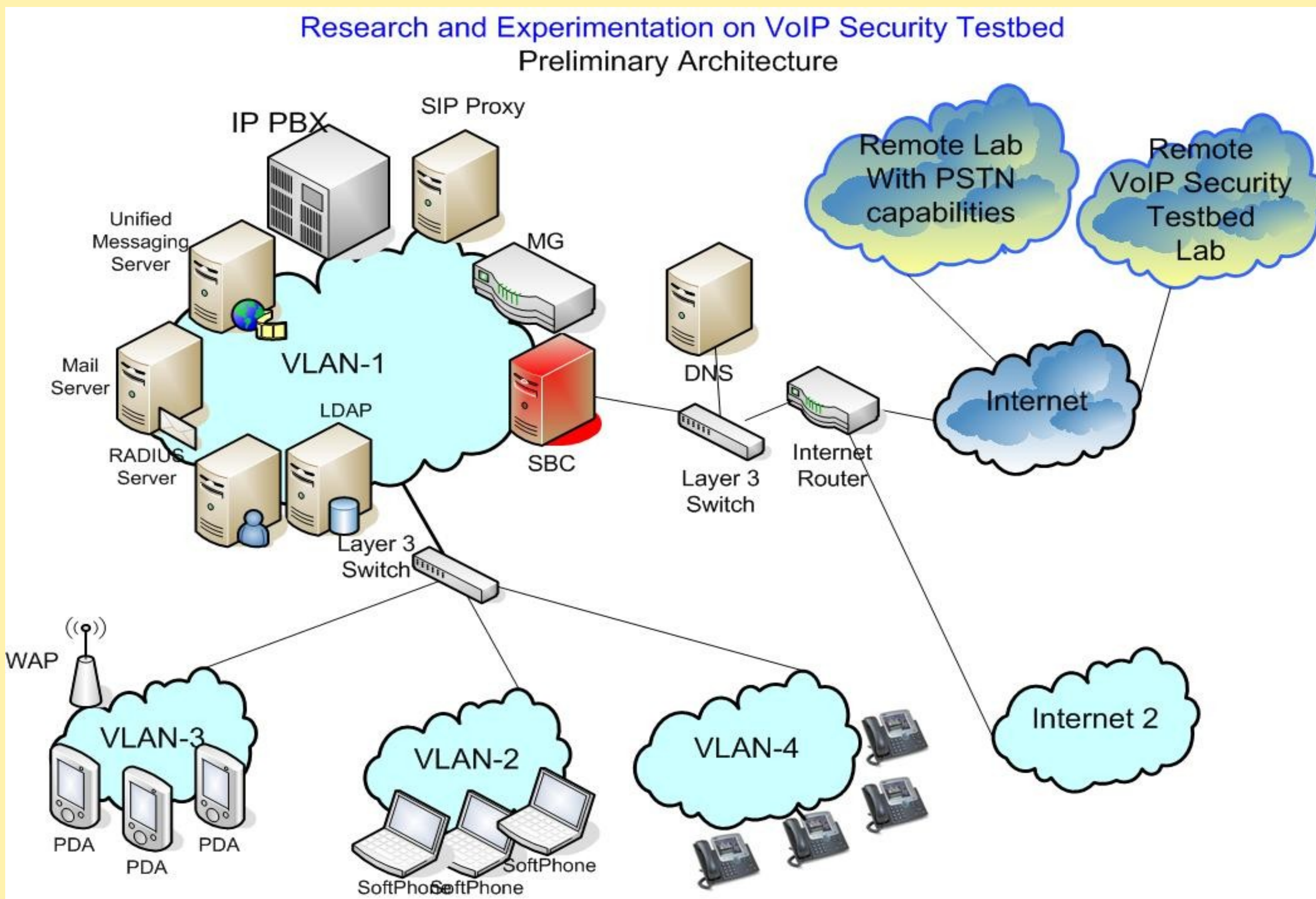
Despite the importance of new multimedia services, there is little data on the *scalability* and *vulnerabilities* of these services.

Example research projects

❖ Defense against denial of emergency 911 service
❖ Defense against denial of multimedia communication services
❖ Spam prevention
❖ Impact of security on Quality of Service

Migration Strategy: Replace access first, edge next, and core networks last

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