Network Processors - Building blocks for next generation networks

Rising cost of operating and maintaining network deployments, increasingly hostile deployment environment caused by virus attacks, denial of service attacks and security breaches, and, a need to provide value added services to customers, has placed an increased emphasis on programmability in the fath-path. This requires that higher-end services such as intrusion detection, firewalls, virus scanning and Quality of service be provided at wire-speed. The talk discusses how Network Processors can be used to effectively address these challenges. Architectural features of new wave of Intel Network Processors - IXP2400, IXP2800 and IXP2850 are detailed. This is followed by a discussion of the software support that is available for these network processors. Finally, some technical challenges relating to building of next generation network processor based networks are shown as a way to promote further discussion and research.