

## IEEE Next Generation Service Overlay Networks - IEEE 1903™ Series (Bundle)

This Next Generation Service Overlay Network (NGSON) series of standards describes a framework of Internet Protocol (IP)-based service overlay networks and specifies context-aware [e.g., such as required quality of service (QoS) level; type of service such as real time versus data; nature of data stream such as I-frame versus B-frame; and type of terminal such as TV monitor versus personal digital assistant], dynamically adaptive, and self-organizing, including advanced routing and forwarding schemes, that are independent of underlying networks. The NGSON architecture provides advanced service and transport-related functions to support context-aware, dynamically adaptive, and self-organizing networks. It specifies a functional architecture for NGSON. The functional architecture consists of a set of functional entities (FEs), their functions, reference points, and information flows to illustrate service interaction and media delivery among FEs and external components. It provides protocols among Content Delivery (CD) Functional Entity (FE), Service Routing (SR) FE, Service Policy Decision (SPD) FE, Service Discovery and Negotiation (SDN) FE, and Context Information Management (CIM) FE to support advanced content delivery capability in next generation service overlay networks. It specifies protocols between Overlay Management (OM) Functional Entity (FE) and all other NGSON Functional Entities, and/or NGSON nodes to enable OM Functional Entity involved self-organizing management capability. It also specifies protocols among Service Routing (SR) Functional Entities to enable OM Functional Entity non-involved self-organizing management capability such as re-organization of overlay structure among multiple SR Functional Entities for recovery from a failed or overloaded SR Functional Entity or for performance improvement of service routing.

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