American National Standard for Telecommunications –

Intelligent Network

1 Scope, purpose and application

This American National Standard defines Intelligent Network (IN) capabilities for telecommunications networks. This standard shall hereinafter be referred to as the T1 IN Standard or T1 IN for short-hand. This document establishes an architectural framework in which the model of the Intelligent Network is defined. The architecture is intended to provide the flexibility to support a wide range of services and facilitates the evolution of future IN functional capabilities through its evolvable, modular structure to achieve service independence. The structure is also intended to support the multi-vendor environment and internetwork capabilities needed to make IN services globally available.

The information contained in this standard is based upon capabilities defined in the International Telecommunication Union - Telecommunication Standardization Sector (ITU-T) Intelligent Network Capability Set 1 (IN CS-1 1995) Recommendations, as well as on the additional protocol needed to support the T1 IN Call Model. The scope of this document includes refinements and selection of options to the existing ITU-T Recommendations to support North American implementations of IN. The document also takes into account the unique needs of the North American telecommunication environment. . Refer to Annex E for a description of supplemental references.

IN CS-1 defines the IN architecture using a four-plane model consisting of:

- Service Plane
- Global Functional Plane
- Distributed Functional Plane
- Physical Plane

While this model is essential for fully describing service development through service execution, this standard focuses on the distributed functional plane and the physical plane. The primary rationale for this is that the implementation of the upper two planes has been vendor-specific in the North American marketplace. Management of the services and data within T1 IN is not part of the scope of this standardization effort.

From an access perspective, T1 IN is limited to narrowband connections (e.g., POTS, BRI). T1 IN is intended to be able to inter-work with all North American narrowband trunk and line signaling. Internetworking between multiple PSTNs, and between PSTNs and wireless will be supported. Initially, as in IN CS-1, calls from the switching elements are limited to single ended, single point of control.

This Standard defines the INAP (intelligent network application protocol) required for support of T1 IN. It supports interactions between the following four functional entities (FEs) as defined in clause 5 of this T1 IN Standard:

- Service Switching Function (SSF)
- Service Control Function (SCF)
- Specialized Resource Function (SRF)