1. NSSCF (and NAALIF)

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NNI-SSCF (Network Node Interface - Service Specific Coordination Function) is a sublayer of SAAL (Signalling ATM Adaptation Layer) that is responsible for mapping the SAAL service suitable for use by SS#7 (Signalling System #7) protocols. The interface primitives are defined in NAALIF module.

1.1 1 Introduction

SSCF sublayers are defined for different applications that use generic SAAL service offered by SSCOP (Service Specific Connection Oriented Protocol). Their purpose is to map the generic service suitable for use by the applications, eg. UNI os NNI signalling application. The functionality in SSCF depends on how well the generic SAAL service suits for the application, for example SSCF for UNI does only simple primitive mapping whereas SSCF for NNI has to provide some functionality in SS#7 MTP-2 (Message Transfer Part) that is not provided by SSCOP.

SSCF for NNI is defined in ITU-T Recommendation Q.2140 [1]. Its main function is to map SAAL service into primitive interface that can be used by MTP-3. In addition to that SSCF for NNI performs other tasks, most notably a link alignment service during the signalling link connection establishment. Before notification of successful connection establishment is forwarded to MTP-3, SSCF for NNI ensures the quality of the link by a proving procedure. Proving is done by sending a number of packets in short intervals (by default 1000 packets with 100ms interval) to the other end and monitoring errors. If no errors were detcted during this proving period, the link is assumed to be OK and connection is established.

SSCF for NNI is not active part of the current TOVE switch controller software (because network signalling was not implemented during 1996), but it proved to be useful for testing SSCOP and simple point-to-point connections. For this reason it is included is this initial release, but no detailed description of the implementation is included in this document.

1.2 2 Features implemented

All features of Q.2140 recommendation are implemented, only the interface to layer managements is implemented as a skeleton, since the layer management (in SAAL module) remains yet to be implemented.

1.3 3 Known bugs and flaws

No known bugs exist at the moment, but SSCF at NNI is not extensively tested yet. When network signalling protocols are completed, also this module experiences some "real" use which may reveal unknown flaws.

1.4 4 Future development

No new features are planned, since the whole functionality of Q.2140 is already implemented.

1.5 5 Statistics

NNI-SSCF development was done during two weeks in June and July 1996.

Activity	Research	Design	Coding	Reviews	Total
Duration (h)	10	10	50	20	90

Table 1 Duration of activities

Lines Of Code (LOC)	Number of files	Number of classes
2462	27	32

Table 2 Metrics

1.6 6 References

[1]   ITU-T Recommendation Q.2140, *B-ISDN ATM Adaptation Layer - Service Specific Coordination Function for Signalling at the Network Node Interface (SSCF at NNI)*, February 1995