Session Border Control – The ATIS Perspective

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Overview & Definitions (1)

- In the context of Session/Border Control, we make two critical classes of distinctions:

1. Session/Border Control vs. Session/Border Controller

2. Carrier VoIP Peering Needs vs Carrier’s Internal S/BC Functional Architecture Needs
1. **Session/Border Control:**
   - Session Border Control - The activities & actions of a collection of network signaling & bearer/media *functions* deployed within a VoIP carrier’s network which assist in interfacing with other carriers and/or end users by providing security, call processing & traffic management capabilities, e.g.: Firewalls, NATs, call admission, policing, etc.

2. **Session/Border Controller:**
   - Specific vendor *implementations* (network elements) consisting of various subsets & supersets of the Session Border Control functions
Overview & Definitions (3)

1. Carrier VoIP Peering:
   • In the context of Peering, the *only relevant* aspects of a carrier’s S/BC deployment are those functions/actions visible to the peer carrier across the interface.

2. Carrier’s Internal Functional Architecture:
   • The specific mechanisms, placements & physical packaging of the various S/BC functions within a carrier’s network are solely an issue internal to that carrier.
   • However, we agree there is value in *establishing core requirements on S/BC functions* in order to:
     1. Facilitate network element interoperability, and
     2. Ensure that these functions act in the same way, regardless of where/how they are implemented in the various providers’ networks.
ATIS VoIP Peering Reference Model

(Note that this reference model is not concerned with the internal details of the providers’ networks, or the manner in which S/BC functionality is internally implemented and distributed)
IMS Architecture – 3GPP

(Note that S/BCs are not explicitly identified (at least not yet)
Current ATIS Functional Architecture and Interfaces

(Note that S/BC functional entities are explicitly identified)
Discussion

o ATIS Viewpoint:

1. “S/BC” is not a functional entity itself.
2. “S/BC” is really just a cooperating set of functions or functionalities distributed amongst one or more already-identified FEs (e.g., P-CSCF).
3. A useful approach is to consider S/BC as a “functional group” spanning a number of already-existing FEs. (A functional group does not necessarily map to a single physical entity.)

o It is essential to adopt a consistent view across SDOs as to terminology and the “proper” level of granularity to utilize in discussing S/BCs.
Summary

- Distinguishing between Session/Border Control and Session/Border Controllers is necessary and useful.

- The distinction between carrier peering needs and a carrier’s internal network architecture needs must be kept in mind - this implies some differences in treatments in standards’ reference models, etc.

- The “correct” functional representation of these so-called “S/BCs needs to be resolved consistently across SDOs, in order to progress NGN standardization work.