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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 Controll*er*
2. Carrier VoIP Peering Needs vs Carrier's Internal S/BC Functional Architecture Needs

Overview & Definitions (2)

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.

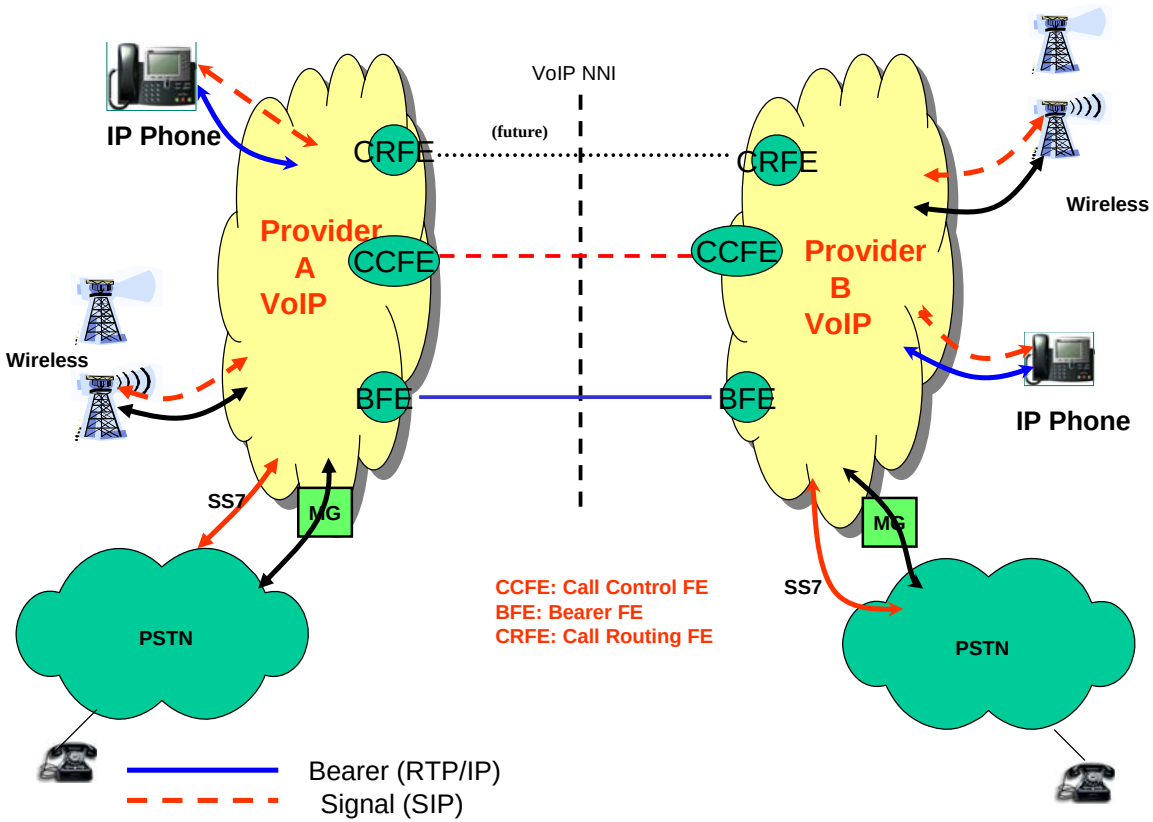
2. Session/Border Controller:
   - Specific vendor *implementations* (network elements) consisting of various subsets & supersets of the Session Border Control functions

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.

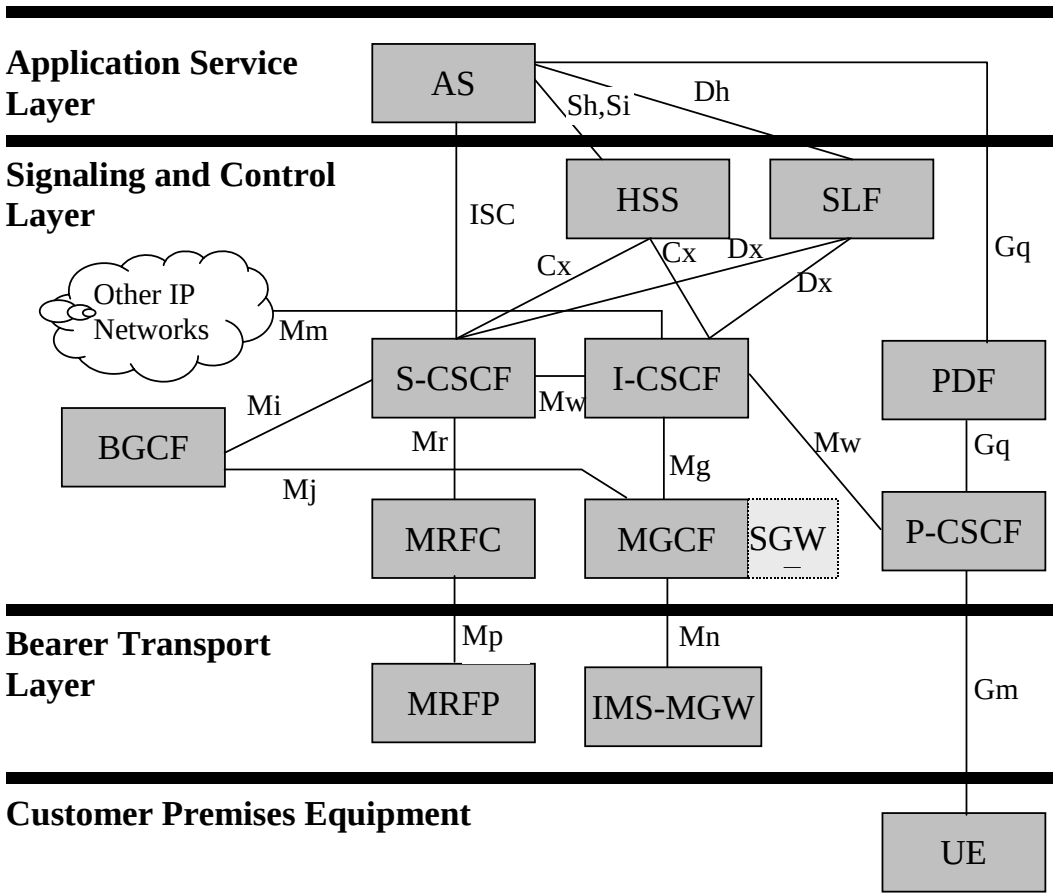
ATIS VoIP Peering Reference Model

(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)



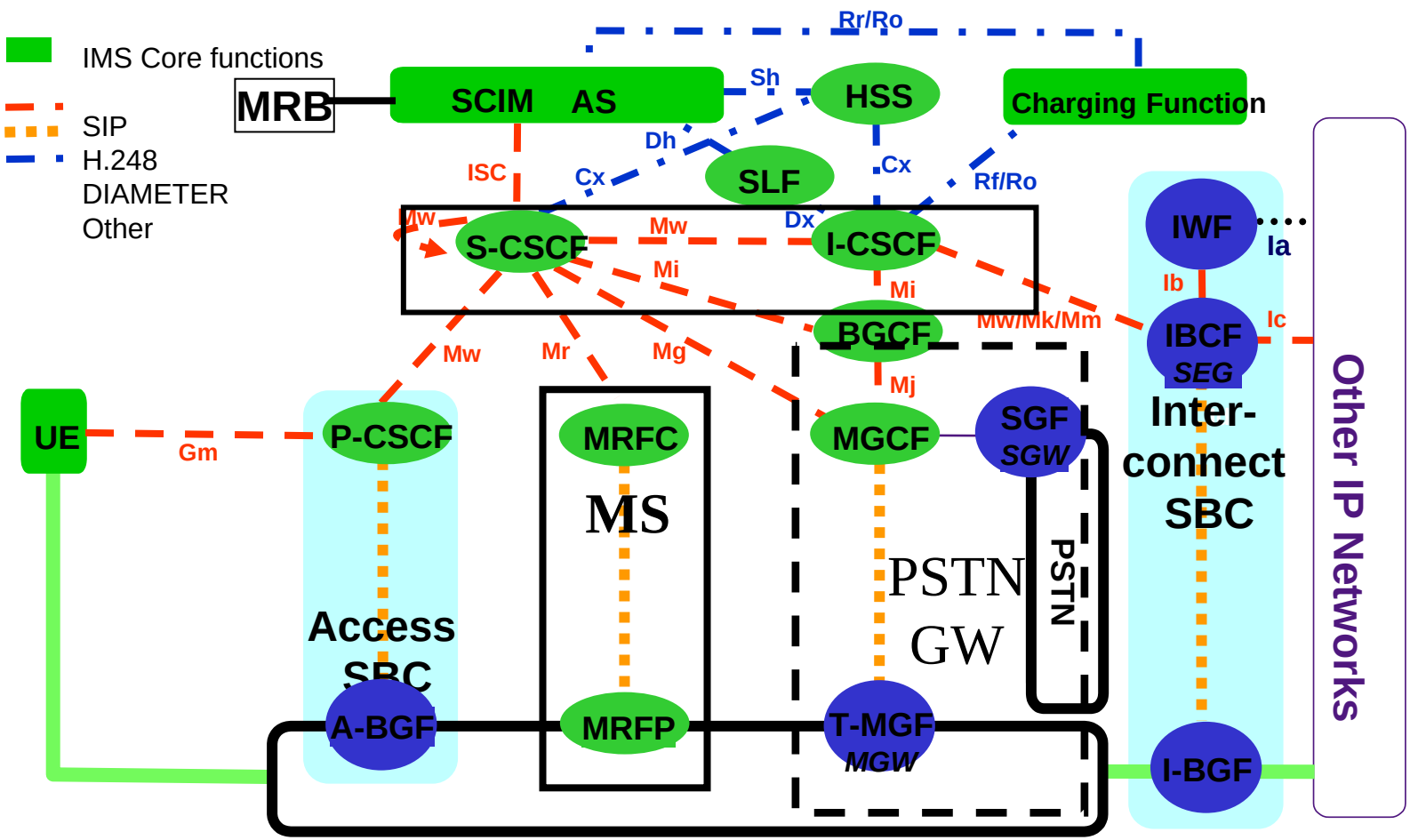
IMS Architecture – 3GPP

(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

- 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.)
  4. Working Document PTSC-SAC-2006-079 contains the ATIS Baseline text for the currently-agreed S/BC functions.

- 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 Controll*ers* 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.