Please click on the note callout for speaker notes!

Version 1: March 2009

ExperiaSphere and IMS

Getting Past Voice and Sessions to the Future of NGN Services

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Some Perspective

- IMS is an architecture to deliver PSTN/ISDN and potentially successor services over IP networks, mobile and wireline
- Most IMS logic focuses on session control and voice calling
- We are of the view that voice service revenues are already in decline and that a voice-centric approach to future services is unlikely to return on investment
- ExperiaSphere illustrates an alternative NGN Services Architecture
- Some ExperiaSphere NGNSA options are symbiotic with IMS, some utilize it, and some displace it—**take your pick!**

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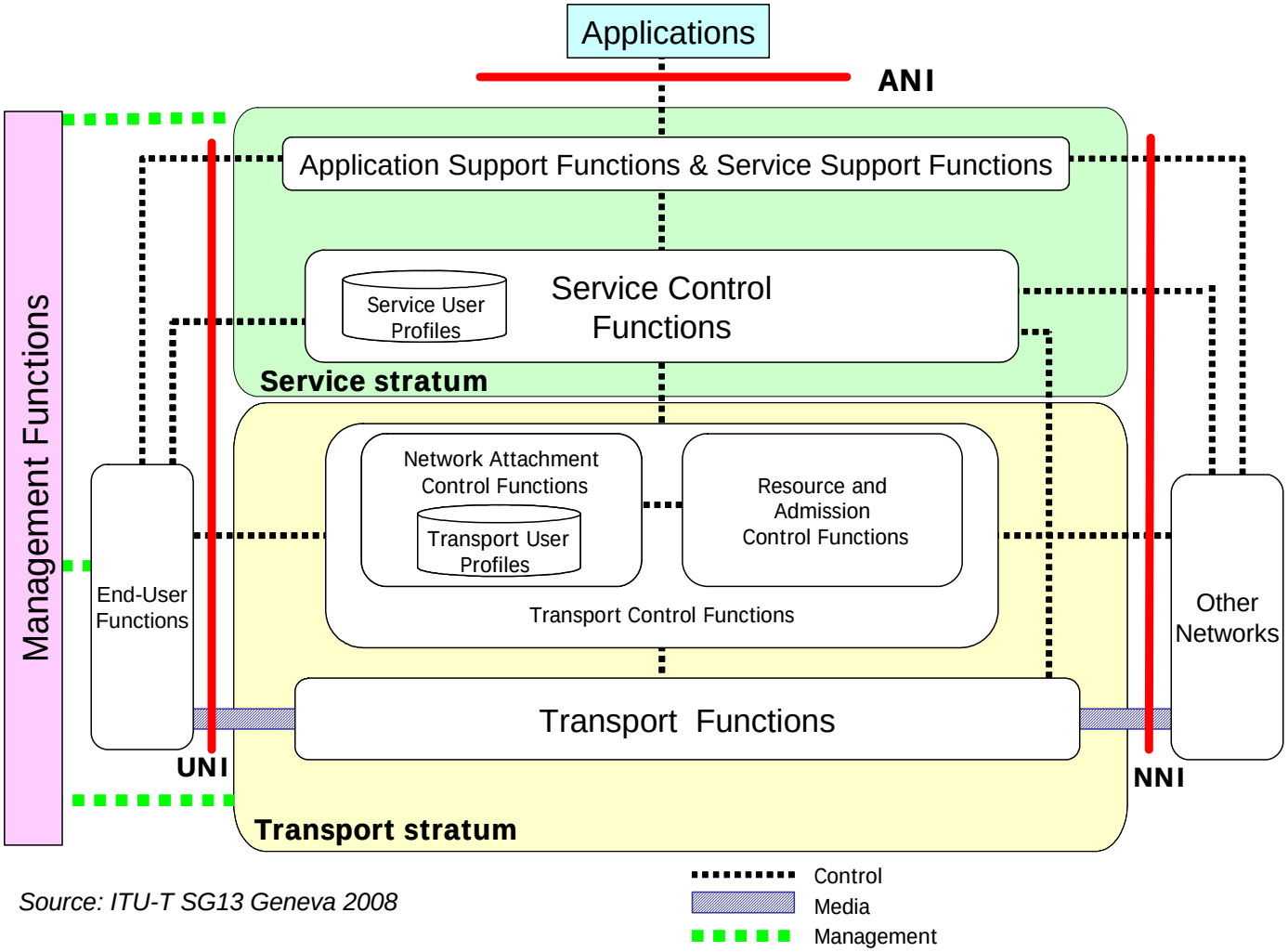
The IMS Model



Source: ITU-T SG13 Geneva 2008

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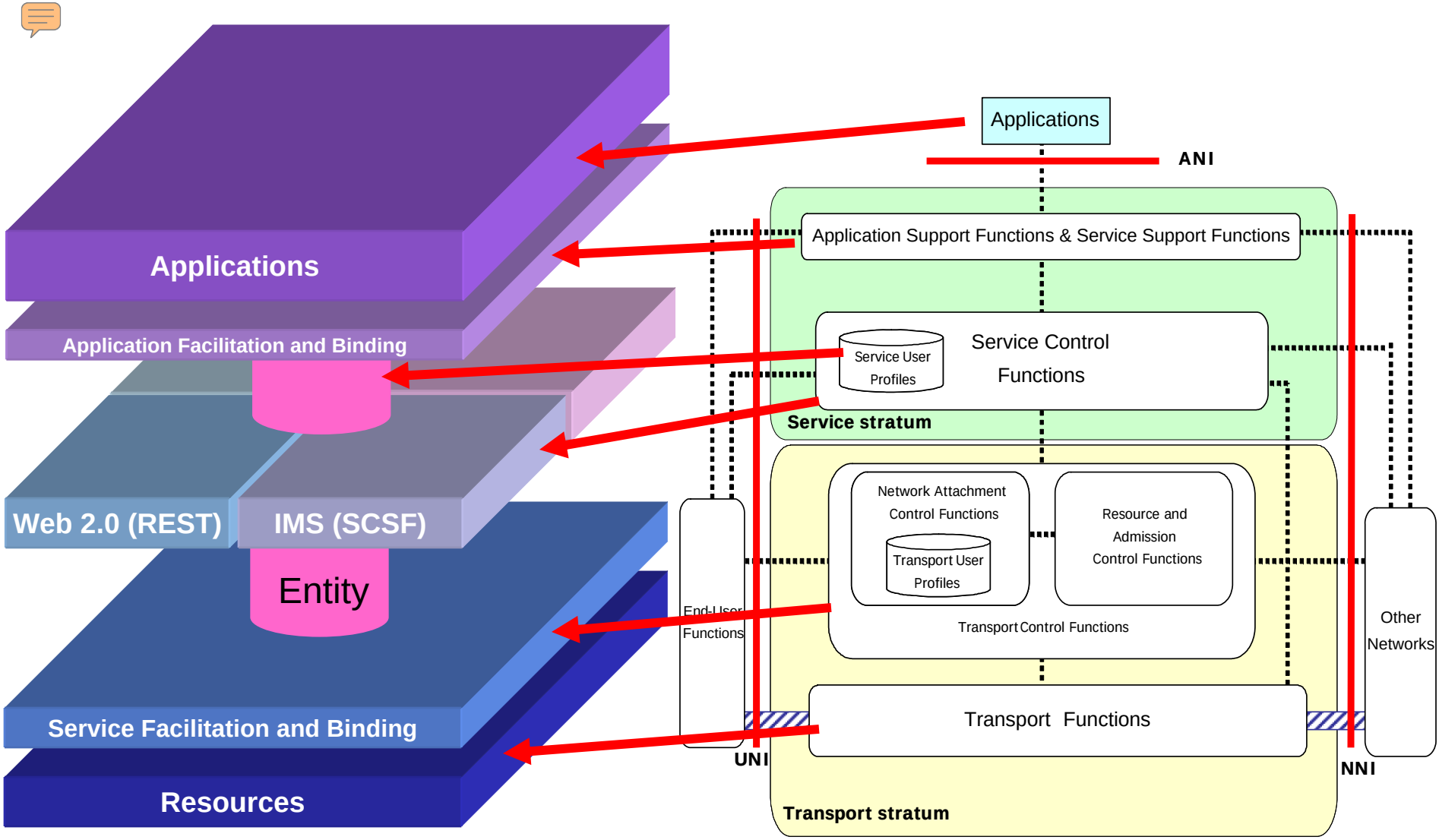

Mapping IMS to the ExperiaSphere NGNSA Reference

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Important Notes on IMS-NGNSA Mapping

- IMS focuses on session mediation for service control and so its Service Stratum functions are less generalized than NGNSA
- IMS applications are more likely than not related to voice features and AIN/CAMEL applications
- IMS Transport Stratum control focuses on “implicit provisioning” and doesn’t handle explicit resource commitments (leased lines)
- IMS concept of Identity is held within the Service Stratum; NGNSA sustains Entity through all the layers

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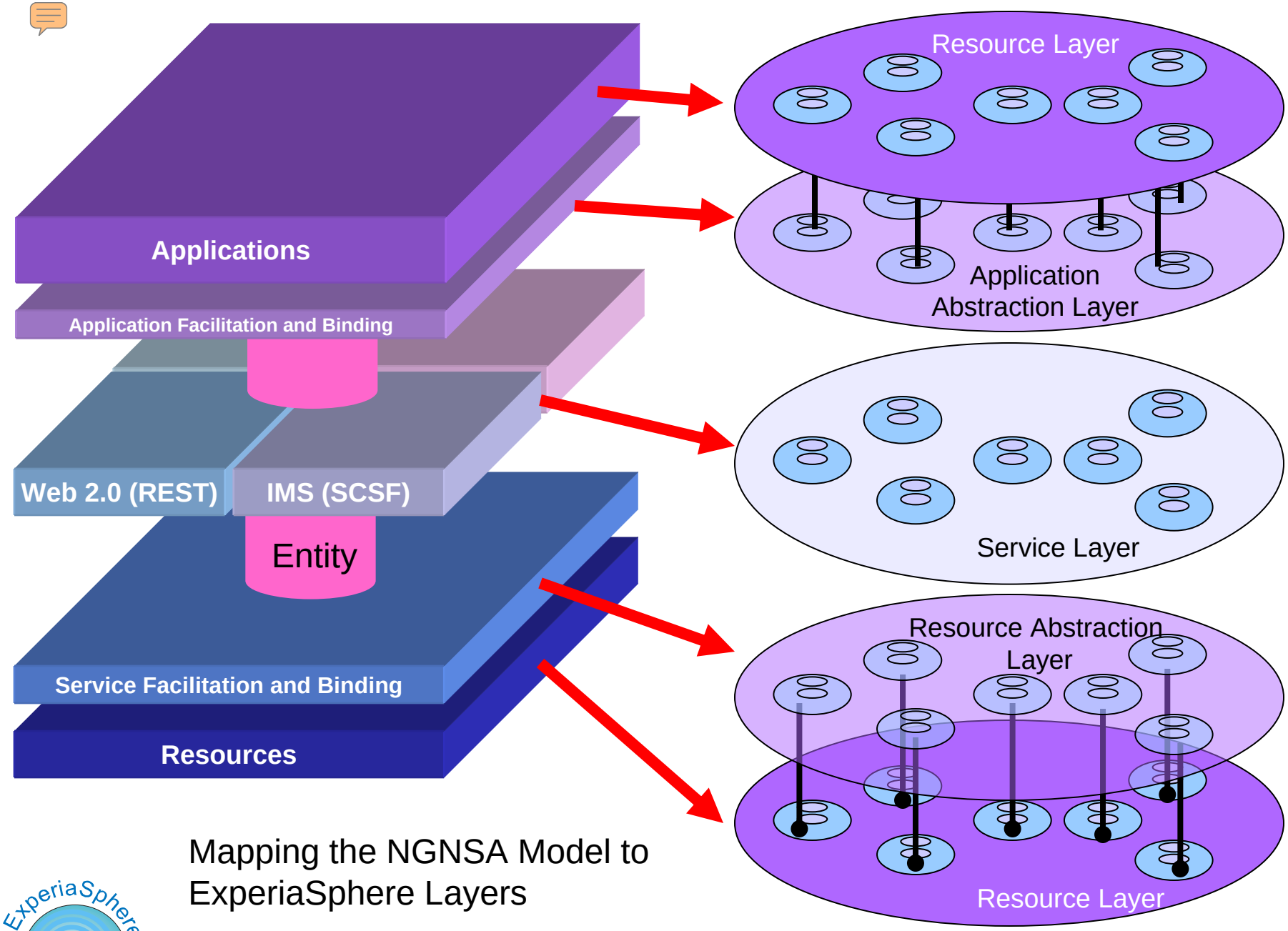

Mapping the NGNSA Model to ExperiaSphere Layers

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Important Notes on NGNSA-to-ExperiaSphere Mapping

- Layers and abstraction are a facility in ExperiaSphere and thus the NGNSA structure is facilitated but not dictated
- Generally, applications and resources are treated symmetrically in ExperiaSphere; the Service/Resource pairing is applicable to both to represent a physical versus logical view
- Entity is a concept of the ExperiaSphere application (an EntityBroker object) outside the strict Experiam hierarchy and thus available to it anywhere

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Integrating ExperiaSphere with IMS

- Multiple relationships are possible
  - IMS can obtain application/resource support from ExperiaSphere
  - IMS facilities for applications and resources can be “exported” to ExperiaSphere
  - IMS and ExperiaSphere could interconnect
  - You could implement some or all of IMS using Experiam structures
  - IMS can be a “connection network” in an ExperiaSphere/SocioPATH sense

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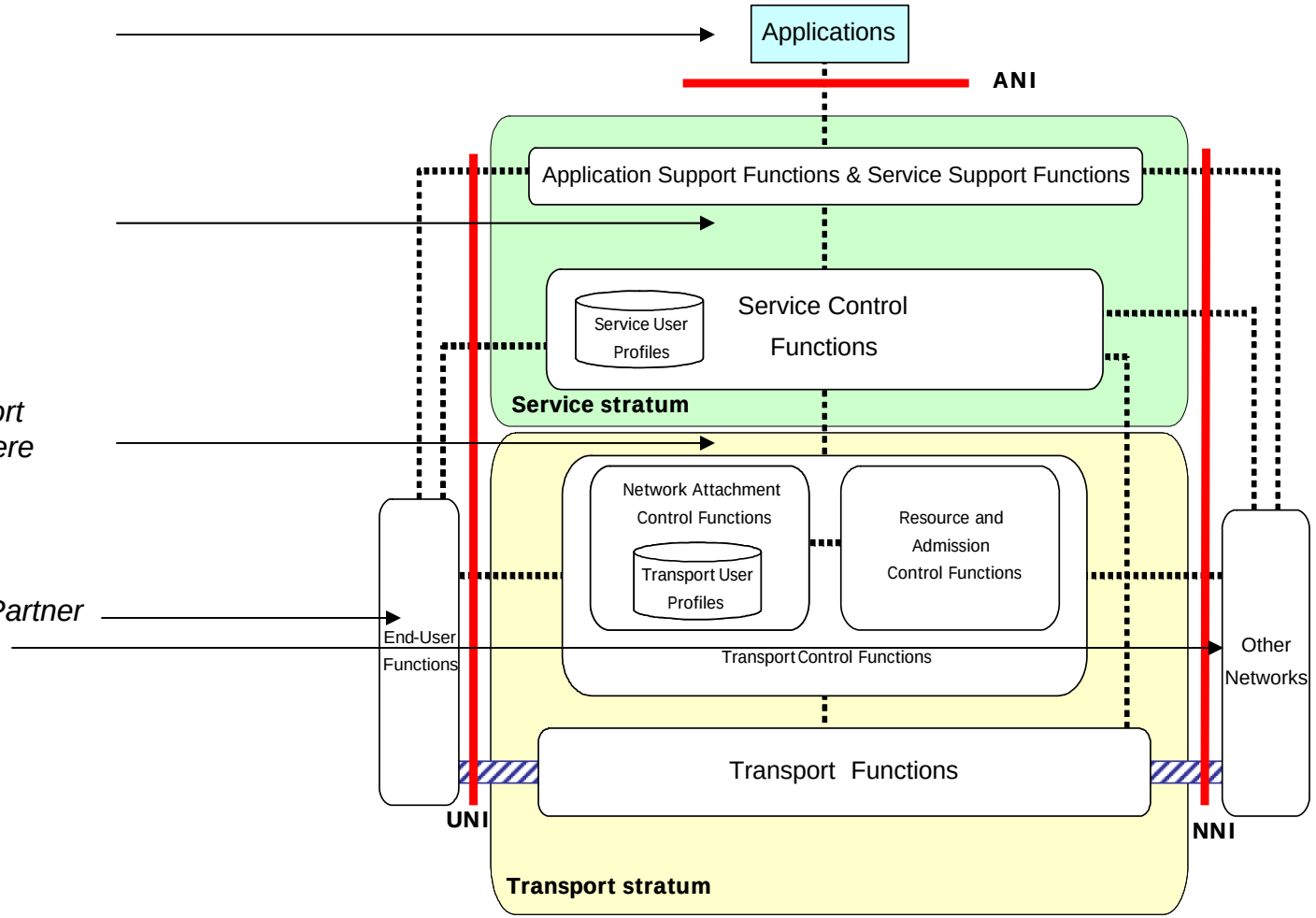
Implementing IMS: Options

Expose ExperiaSphere elements to IMS as Applications via ANI

Implement IMS Service Control via Experiams

Implement IMS Transport Control via ExperiaSphere Resource Layer

Emulate IMS UNI/NNI Partner Functions



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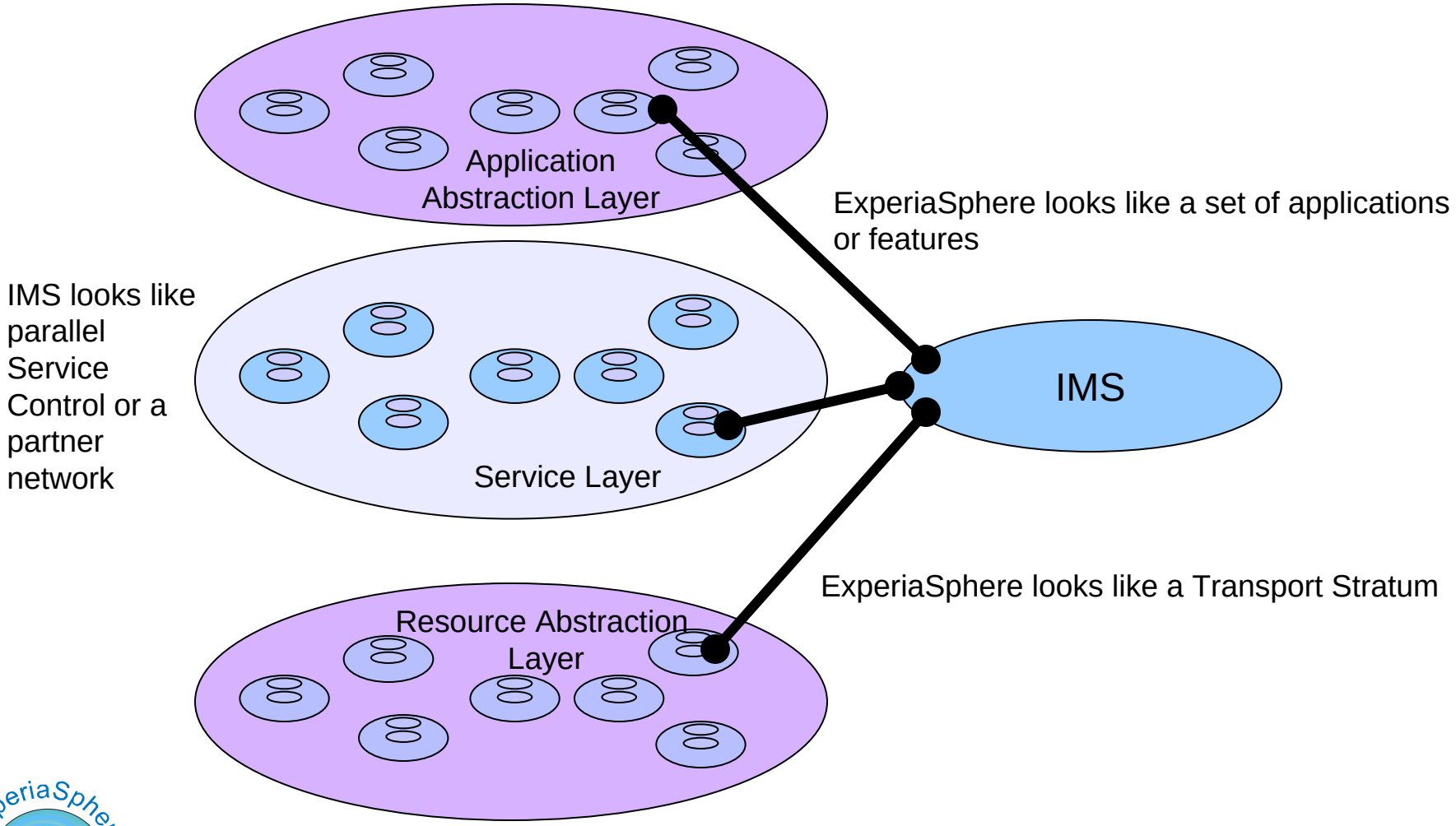
IMS as a System to Integrate



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ExperiaSphere as an IMS Resource

- Application or Transport elements created in ExperiaSphere can be presented to IMS via the appropriate IMS interface, implemented on an ExperiaSphere Messenger
- The IMS use of these elements is in parallel with non-IMS usage of the same elements
- There may or may not be “real” IMS elements at the Application or Transport level in addition to the ExperiaSphere ones

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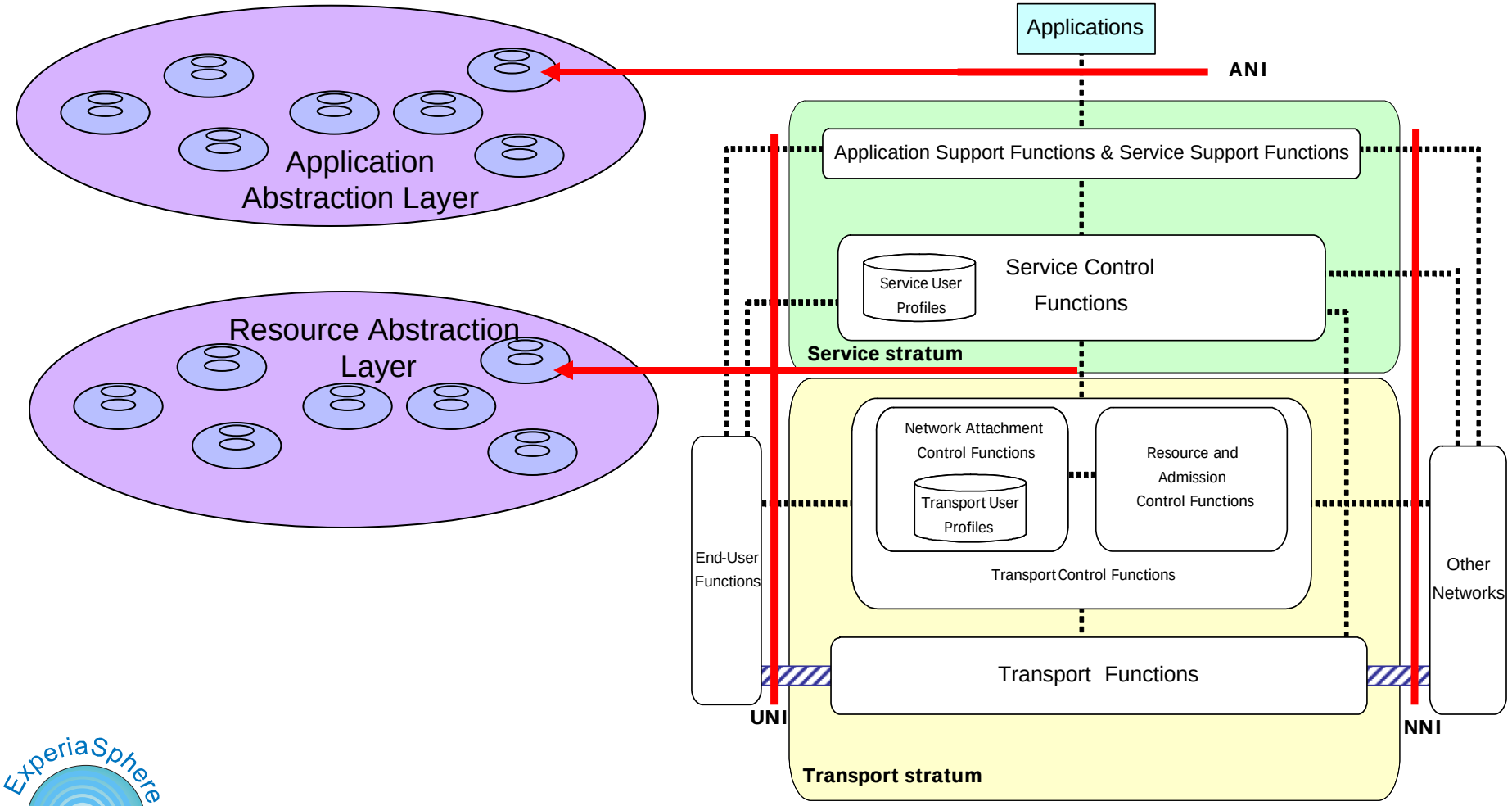
Integrating With IMS Resources



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ExperiaSphere as an IMS Application

- The normal use of Application Layer functionality in IMS is for CAMEL (Customised Applications for Mobile network Enhanced Logic)
- The Protocol involved is called CAP (CAMEL Application Part)
- This is a trigger-based process and so it would be service logic rather than service management (SLEE versus SMEE) in ExperiaSphere

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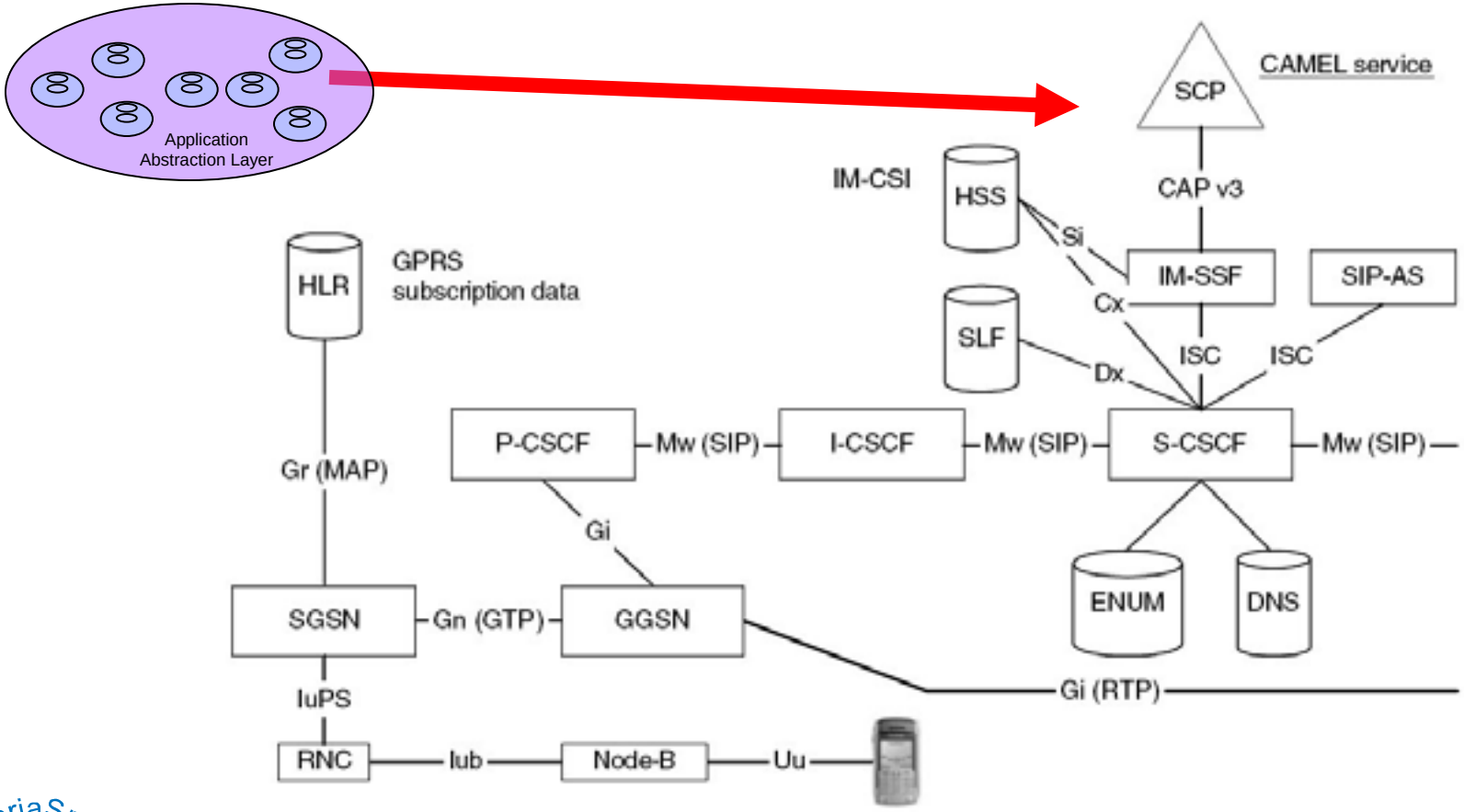
ExperiaSphere Applications/Features in IMS



Source: CAMEL: Intelligent Networks for the GSM, GPRS and UMTS Network

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ExperiaSphere as IMS

- We aren't trying to replace IMS (that would be a pretty arrogant goal) but it would be possible to implement IMS, meaning create an "ExperiaSphere black box" that looked to the outside world like IMS
- If desired, that "black box" could have sub-components that were mapped to the various IMS entities, meaning that a piece of IMS could be implemented by ExperiaSphere

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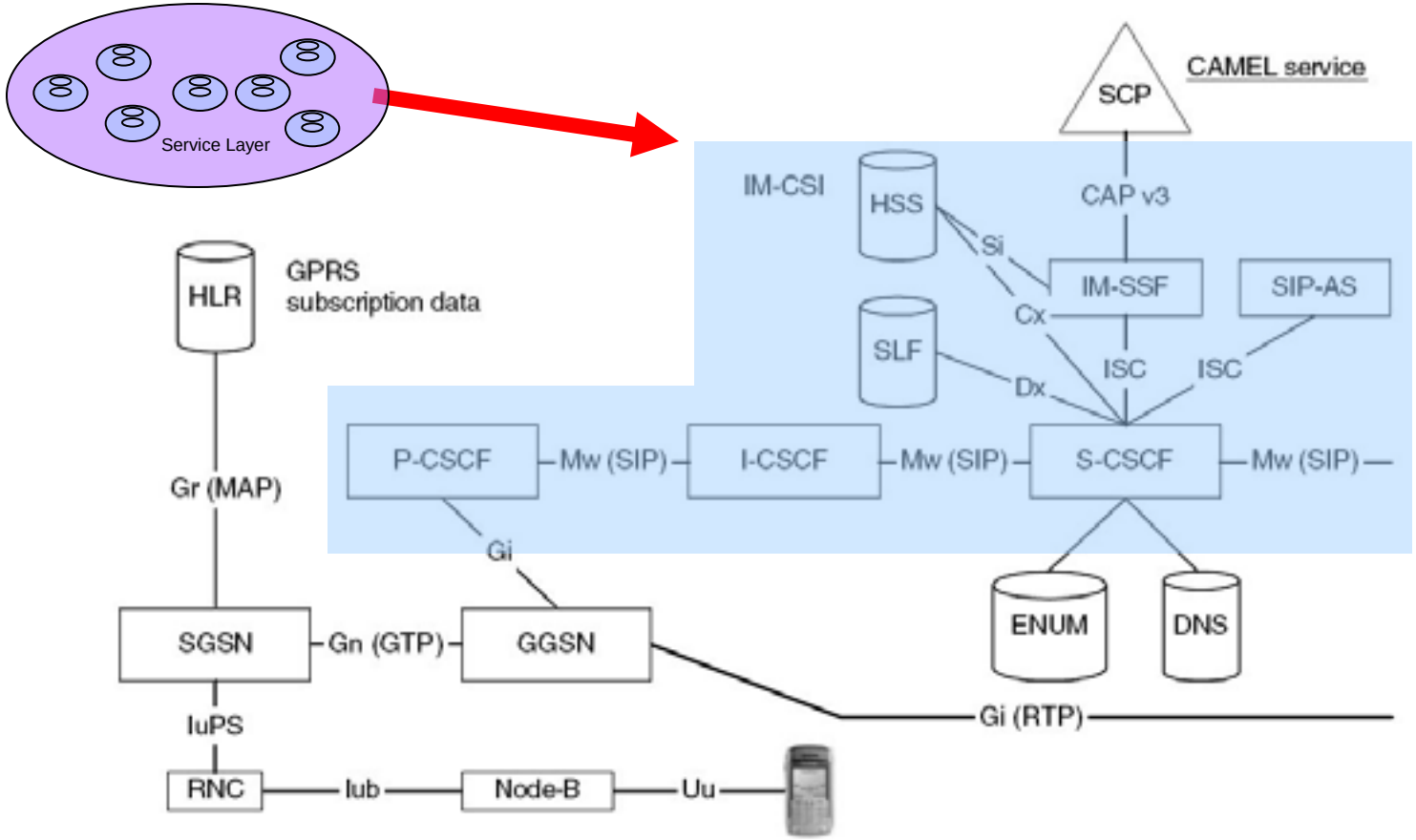
ExperiaSphere-Based IMS Service Control Logic



Source: CAMEL: Intelligent Networks for the GSM, GPRS and UMTS Network

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ExperiaSphere-Based IMS Transport Control Logic

- We've noted that we can support the Gq' interface of IMS in ExperiaSphere
- Evolution of NGN thought is taking us to the Future Packet-Based Network (FPBN)
- ExperiaSphere Messengers make supporting different interfaces easy

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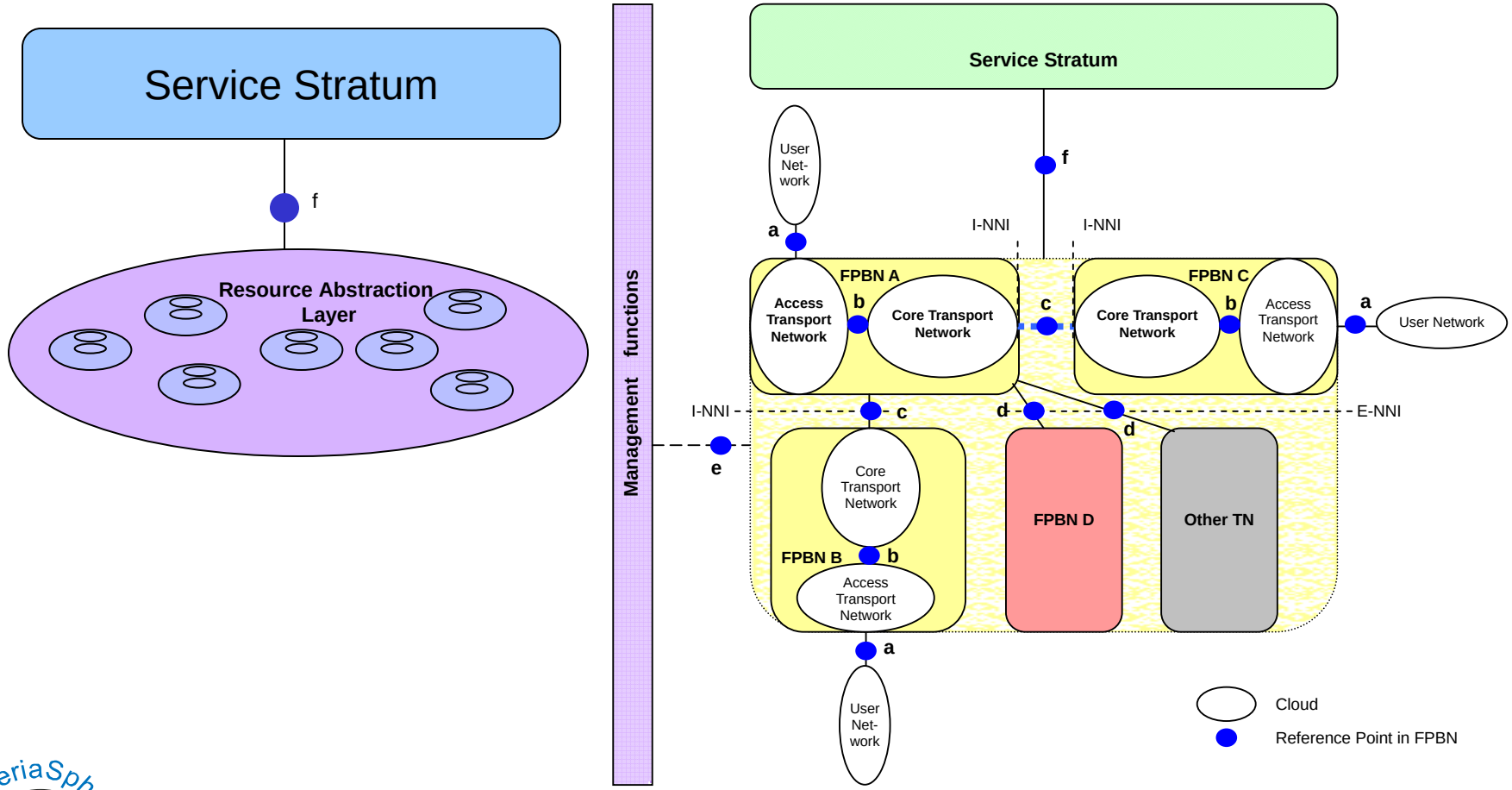
ExperiaSphere-Based IMS Transport Control Logic



Source: FTBN; China Academy of Telecomm. Research of MII

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Summary

- We are of the view that the concept of an IP Multimedia Subsystem in itself argues that there are other subsystems
- The ITU has codified that view in their own NGN approach
- We believe that if there are multiple options for Service Control that include IMS, there should be a general service control architecture as a part of an NGN Services Architecture
- ExperiaSphere can build that service control architecture, and can harmonize with any IMS tools in place or put into place later
- ExperiaSphere can build services that don't involve sessions, using any available IMS tools
- ExperiaSphere can provide applications, transport, UNI, and NNI support to IMS as needed
- We're happy to talk further on this; contact experiasphere@cimicorp.com

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