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Remote environment (e.g. home) Local environment (e.g. friend's place, hotel)

cellular
signaling
signaling
media stream
media stream
fixed broadband

Remote Service Usage Through SIP With Multimedia Access as a Use Case

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Agenda

- Use cases for remote access
- Remote access protocol
 - Design
 - Tests & Results
- Summary
- Questions

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Remote access use cases

- ⇒ Consume remote services in a local network
- ⇒ Provide services from the local network
- ⇒ Remote and local service cooperation

Remote environment (e.g., home) Local environment (e.g., friend's place, hotel room, mobile)

Home IMS Gateway Portable IMS Gateway
Media Server (CMS) Display (DMR)
RGW Stereo (DMR)
RGW + WLAN AP

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Remote Access Protocol

PIRANHA

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Establishing a service invocation session

Session Description offer	IP Multimedia Subsystem	Terminating network
v=0 o=visited.sdg.380446179.3380446179 IN IP4 192.168.168.31 s= c=IN IP4 192.168.168.31 t=0 Service Discovery Gateway a=sendonly m=application/9-TCP-piranha a=udn:uid:9afb3231-345a-4cd1-b448-8866b79ff91b a=setup:active	Proxy sip:pcscf@myoperator.example	Service Discovery Gateway sip:home.sdg@myoperator.example
v=0 o=home.sdg.380446179.3380446179 IN IP4 192.168.168.32 s= c=IN IP4 192.168.168.32 t=0 a=recvonly m=application/9000-TCP-piranha a=udn:uid:9afb3231-345a-4cd1-b448-8866b79ff91b a=setup:passive	Proxy sip:pcscf@myoperator.example	Service Discovery Gateway sip:home.sdg@myoperator.example

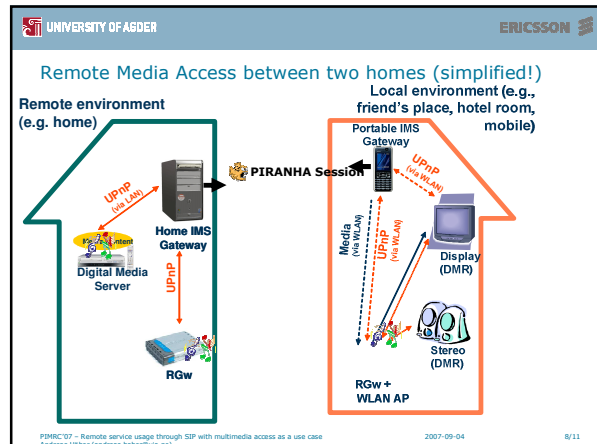
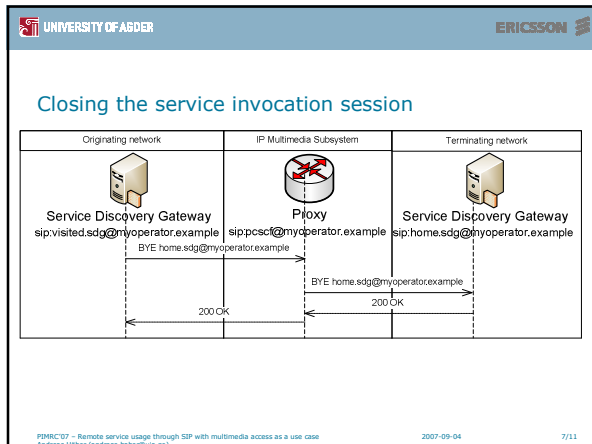
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Updating a service invocation session

Originating network	IP Multimedia Subsystem	Terminating network
Service Discovery Gateway sip:visited.sdg@myoperator.example	Proxy sip:pcscf@myoperator.example	Service Discovery Gateway sip:home.sdg@myoperator.example
Originating SDG updates the session (e.g. no longer needs a device)	UPDATE home.sdg@myoperator.example	UPDATE home.sdg@myoperator.example
200 OK	200 OK	200 OK
UPDATE visited.sdg@myoperator.example	UPDATE visited.sdg@myoperator.example	UPDATE visited.sdg@myoperator.example
200 OK	200 OK	200 OK
		Terminating SDG updates the session (e.g. device got offline)

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Long-range remote access testing

- Streamed media from a remote UPnP A/V Media Server to a local UPnP A/V Media Renderer
 - Streamed music from Ericsson Eurolabs Deutschland in Aachen, Germany to the University of Agder in Grimstad, Norway
 - Downloaded a picture from Ericsson Canada Inc in Montreal, Canada to EMCC Software Ltd, Manchester, United Kingdom
- The traffic between the originating and terminating networks went through IPsec-tunnels
- No significant delays were encountered during our testing

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Summary

- Motivated why remote access is necessary
 - The **Portable IMS Gateway (PIGA)** is important so you can bring it with you wherever you go
- Why do we need the *IP Multimedia Subsystem (IMS)* here?
 - First, our solution works with *any* SIP network
 - However, with IMS you get support for **authentication** of users, **addressing** of distributed services, and **Quality of Service**
- Shown an example of remote media access
 - Including a portable client
- Service discovery part is missing in our prototype
 - We have designed a solution based on *OMA Presence SIMPLE*
 - Gives **service presence awareness**, in addition to the existing *user presence*
 - Both service presence status & its capabilities are exchanged

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Questions

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