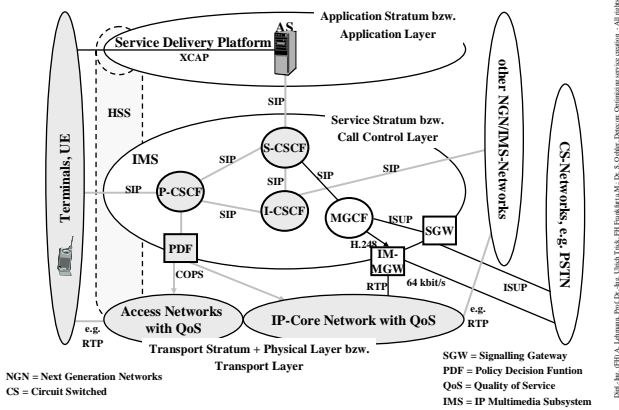


Optimizing Service Creation and Deployment for different Service Providers' Scenarios

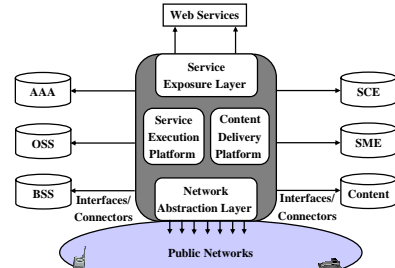
7th Würzburg Workshop on IP: Joint EuroFGI and ITG Workshop on "Visions of Future Generation Networks" (EuroView2007)
 Dipl.-Ing. (FH) Armin Lehmann, Prof. Dr. Ulrich Trick – Research Group for Telecommunication Networks. University of Applied Sciences Frankfurt/M.
 Dr. Steffen Oehler – Detecon International

NGN/IMS-Architecture



SDP (Service Delivery Platform)

Architecture:



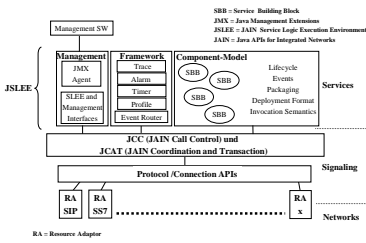
AAA = Authentication, Authorization and Accounting
 OSS = Operational Support System
 BSS = Business Support System

SCE = Service Creation Environment
 SME = Service Management Environment

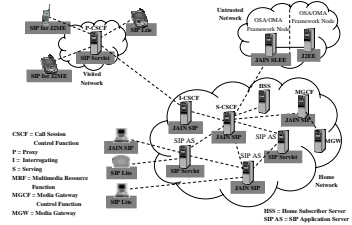
Overview of the technologies for service creation in NGN/IMS:

JAIN, Servlets, OSA (Open Service Architecture) / Parlay, Parlay X, OSE (Open Mobile Alliance Service Environment), Web Services, CGI (Common Gateway Interface), CPL (Call Processing Language)

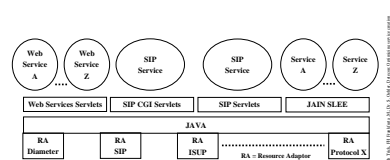
JAIN SLEE-Architecture



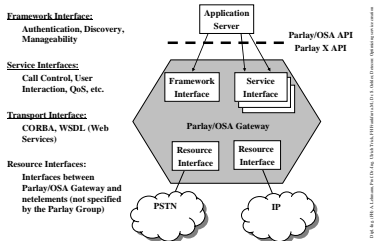
JAVA-Platforms and NGN/IMS



Combining different solutions



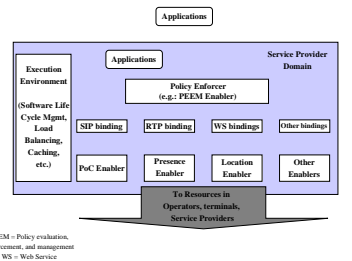
OSA/Parlay and Parlay X



Comparison of today's solutions

	Parlay	OSE	Web Services	SIP Servlets	JAIN SLEE	JAIN SIP	CGI	CPL
Portable (OS, Hardware)	yes	yes	yes	yes	yes	yes	belongs to used programming language	yes
Security	yes	yes	yes	mainly	yes	yes	no	yes
Scalability	good	good	good	good	good	good	good	poor
Expandability	very good	very good	very good	very good	very good	very good	very good	poor
Performance	high	high	low	very high	high	high	low	low
Number of software engineers	many excepting CORBA	language dependent	lots of	lots of (require SIP-Knowledge)	lots of	lots of (require SIP-Knowledge)	many (mainly Web-Programmer)	few
Costs per System	very high	high upto very high	medium	medium	high	medium	medium	low
Development effort	approx. 3 months	approx. 3 months	few weeks	few weeks	approx. 3 months	few weeks	few weeks	few days

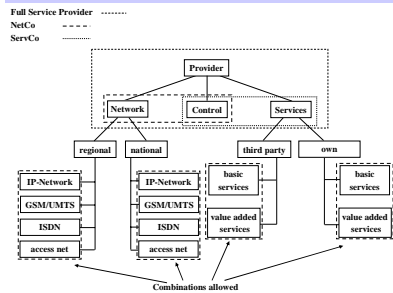
OSE-Architecture



Solution scenarios' for different business models:

Full Service Provider, Communication Network Provider (NetCo), Communication Service Provider (ServCo)

Business models



Scenario example

provider	own network	access net	additional networks e.g. by other NetCo	national or regional	number of customers	number of services	complexity of services	key
Full Service Provider	IP	yes	non	regional	small	small	low	FSP 1
					large	large	high	FSP 2
					small	small	low	FSP 3
					large	large	high	FSP 4
	national	small	small	low	FSP 5			
		large	large	high	FSP 6			
		small	small	low	FSP 7			
		large	large	high	FSP 8			

Scenario example

key	OSAP/Parlay	OSA/OSAs	JAIN SLEE	JAIN SIP	Web Services	SP Servlets	SP CGI	CPL	recommendations
FSP_1	very expensive and very extensive	very expensive and very extensive	very expensive and very extensive	good solution in combination with JAIN SLEE	good solution, good for complex services	good solution, good for complex services	good solution, good for complex services	good and secure solution for secure creation by end users	JAIN SIP or SP Servlets should be chosen for fast access. CPL or Web Services are good additions.
FSP_2	very expensive and very extensive	very expensive and very extensive	good solution, support for many protocols	good solution in combination with JAIN SLEE	good solution, good for complex services	good solution, good for complex services	good solution, good for complex services	good and secure solution for secure creation by end users	JAIN SLEE in combination with JAIN SIP or SP Servlets is a good solution. For third Party Access OSAs/Parlay or JAIN SPA are good solutions.
FSP_3	good solution, especially for third party access	good solution, especially for third party access	good solution, support for many protocols (e.g. SIP, ISUP, Megaco)	good solution in combination with JAIN SLEE	good solution, good for complex services	good solution, good for complex services	good solution, good for complex services	good and secure solution for secure creation by end users	JAIN SLEE in combination with JAIN SIP or SP Servlets is a good solution. For third Party Access OSAs/Parlay or JAIN SPA are good solutions.
FSP_4	good solution, especially for third party access	good solution, especially for third party access	good solution, support for many protocols (e.g. SIP, ISUP, Megaco)	good solution in combination with JAIN SLEE	good solution, good for complex services	good solution, good for complex services	good solution, good for complex services	good and secure solution for secure creation by end users	JAIN SLEE in combination with JAIN SIP or SP Servlets is a good solution. For third Party Access OSAs/Parlay or JAIN SPA are good solutions.