Parlay / OSA APIs in new Telco Eco Systems

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Agenda

- Introduction
- Business Drivers
- Service Architecture
- Development Environment
Infitel Mission
Leading the way in Infinite Networking

- Infitel develops and markets leading edge **value generating applications** for Telco's and Service Providers in fixed and mobile environments
  - delivering extremely reliable Application Servers with enormous scalability based on radically new technology
  - enabling our customers to stay ahead of the competition by providing new dimensions of flexibility going beyond prior imagination
  - unleashing infinite creativity by continuous adoption of all relevant existing and emerging open standards
Infitel International N.V.

Financial Backing (20 Mio. Euro Capital raised):

Corporate Management:
Wido Strasding
René de Greef
Stefan Gieseler

Key Management:
Seasoned Management,
with > 100 years experience
in the Telecommunications Industry
Open Standard Application Server

PLMN

MSC

HLR

BSC

IP Network

Enhanced Services Execution
Controls specialized resources

PSTN

SCP

STP

Switch

Application Server

Access
Business Challenges
A Paradigm shift ? The „Internet“ way of life ?

- Network agnostic users demand network agnostic services
- People communicate mobile and „have fun“ when they are on the move…
- People want „enriched“ communication
- People are less devoted to providers but more interested in low prices
- People want services that they perceive as an added value to plain voice calls („A calls B“)
- More players fight for the same customers
- Changing value chains
Translate into: Solution requirements

Some answers in sight?

- Solutions must be “multi network compatible” (PSTN, PLMN, IP)
- Infrastructure must have competitive prices, small footprint to start, real scalability to grow
- New Services → “Infinite Networking”
- Services which combine voice and data
- Services for which customers will “even pay for”...
- Solutions that support new business models and work in a multi-party eco-system
- Hide complexity of technical interfaces (AND processes) to offer services and content via Telecommunication networks
Interfaces and APIs are important
...because they leverage new business models
What is Parlay / OSA

Next Generation Applications

Conventional Applications:
• Mass market
• Easy to manage
• Limited flexibility
• Long time to market

Next Generation Applications:
• Customized services
• Easy to manage
• High flexibility
• Short time to market
• Complex Telco-IT integration

Source: Parlay Group
What is Parlay / OSA Principles

• Multiple Applications

• API set

• Multiple Plug-in resources

Source: Parlay Group
What is Parlay / OSA

Principles

Parlay Framework

Parlay Implementation within SecureTelco Domain

Source: Parlay Group
What is Parlay / OSA

Standards bodies

- Parlay Member Meetings
  - API Specs v2.1 / 3.0
- 3GPP
  - Open Services Architecture
    - Release 3
- ETSI SPAN 12
- JAIN Parlay

Joint Development

Co-operation
Building Services
Infitel Solution’s Key Features

- Layered architecture, standard I/F
- Supported by Development Environment
- Infinite Reliability
- Infinite Growth and Flexibility
- OS/HW Platform Independence
- Parlay / OSA Framework
- Parlay / OSA CC + CBC APIs
- Combined with application suite
InfiCore – Layered Architecture
Distributed Processing Environment

Application Layer
InfiCore RMC
Krypton ORB
Communication

Prepaid Card
Calling Card
Premium Rate
Split Charge
Free-phone
Multi-Network, Multi-Service
Plug-in protocol support

InfiCore middleware

Network Interface Adaptor
(Call Control, Signaling)

Internet Application Adaptor
(WEB, WAP, IPT Services)

Media Application Interface
(User Interaction Control, Messaging Control)

Classical IN Services (SCP)
Enhanced Srv.s with switching (SN)
Mobile Services
IN & WEB integrated Services
IVR / Voice Services

INAP, MAP
ISUP
ISDN
H.323, MGCP
WAP
HTTP
S.100
SMTP, IMAP, POP

IN signaling
PSTN CallControl
VoIP IPT
WAP Services
WEB Services
IVR, TTS, ASR
email
Powerful, Open Application Server

Features

- InfiCore links applications with the underlying platform and network infrastructure
- Service management Functions
- Resource management / Load balancing
- On-line System management including tracing, logging and statistics
- Service Testing Functions
- Multiple services run simultaneously on the same (virtual) InfiCore platform
InfiCore ORB & Communication
A solid foundation

- Telco grade DPE: ORB + Infitel MRT™ architecture
- GIOP/IIOOP ensures communication to standard ORB’s
- Standard ORB features enhanced with own architecture on top
- InfiCore internal communication uses optimized protocol uses UDP, IPC
InfiCore Object Architecture (extract) 1

- GUI
- OA&M Interface
- Service Logic Processor
- Database Access Object
- Media Application Interface
- Database
- Media Server

Interactions:
- Gateway Object
- Other systems e.g. other ORB
- e.g. IIOP Interface
- SQL Standard
- e.g. S.100 Interface

Other systems e.g. other ORB

IDL Interface
InfiCore Object Architecture (extract) 2

- Gateway Object
- Database
- Media Server
- Media Application Interface
- Database Access Object
- Service Logic Processor
- OA&M Interface
- GUI

- e.g. Microsoft Windows NT/2000 system
- e.g. Compaq NSK system
- e.g. different UNIX systems (HP, SUN, Tru64)
- e.g. Microsoft Windows NT/2000 system
- e.g. Microsoft Windows NT/2000 system
- e.g. other ORB
- System
- e.g. Microsoft Windows NT/2000 system
- e.g. different UNIX systems (HP, SUN, Tru64)
- e.g. Compaq NSK system
Resource Architecture (RMC)
Fault Tolerance, Scalability, Availability

Diagram showing the relationships between ResDir, ResMgr, Factory, and Instance.
Infitel NG Open Service Platform

Network Protocols:
- ISDN
- INAP
- CAMEL
- H.323

JAVA client SLEE
- Mexe

InfiCore
- Network Adapter
- Media Adapter
- Online Payment Engine

PARLAY AS
- INFITEL
- ISV/ASP
- Content P.
- MVNO

PARLAY GW

SCE

Intelligent (mobile) device

PSTN / PLMN / IP Net

12-09-2001 v1.0
Building Services
Infitel’s Parlay/OSA Development Environment

“Ease” API complexity:

- Graphical design of service logic
- Extensive Component Library, ITU-SS/, ISDN, OSA/Parlay; combining functions and data
- Management of Service Packages, Deployment and Versioning
- Service logic compiled for high-performance

Result:
Fast time to market for Next Generation Applications
Building Services
Service Sample
InfiScript – complete SCE
Graphical Service Creation and Maintenance Environment

- Service Repository
- Versioning
- InfiScript Compiler
- Graphical Editor
- Custom SIBs
- Customized Properties
- Comp. Rules
- Announcement Repository
- Container Management
- Audio Format Converter
- Audio Studio / Announcement Data Editor
- Object Repository
- Versioning
- Object Definitions
- Object Editors
- Package Definition Repository
- Versioning
- Package Definition Editor
- Pack/Export Module
- Packer
- Targets

Service Logics
Announcements
Objects

Announcements
Pack/Export Module
Pack/Export Module
Wrap up

- Strong demand/future for open I/F’s and API’s in the Teclo space
- First solutions are available but the challenge is to combine API’s “trend to complexity” vs. ease of use for “mass market use”

- If you are interested to collaborate / exchange ideas / use SW for research please contact me
Thank you

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ANY QUESTIONS?