

TheSDPAlliance

Service Delivery Platform

A larger version of the TheSDPAlliance logo, featuring a stylized starburst or flower-like shape composed of several arrows pointing outwards in various directions, with colors ranging from light blue to dark blue and green.

Developing An End-To-End Architecture

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Mobility Data Systems

Agenda

- **Matching Operator Requirements**
- **The SDP Alliance Participants**
- **The SDP Alliance Architecture**
- **Conclusions**

- **No two operators have the same SDP requirements**
 - Multi-vendor infrastructure & access networks
 - Heterogeneous mix of legacy & proprietary services
 - Different market conditions & business drivers

- **To satisfy Operator requirements we need:**
 - A flexible reference architecture
 - A broad portfolio of best-in-class products & partner strategies
 - Business Consultancy & System Integration

Operator Challenges

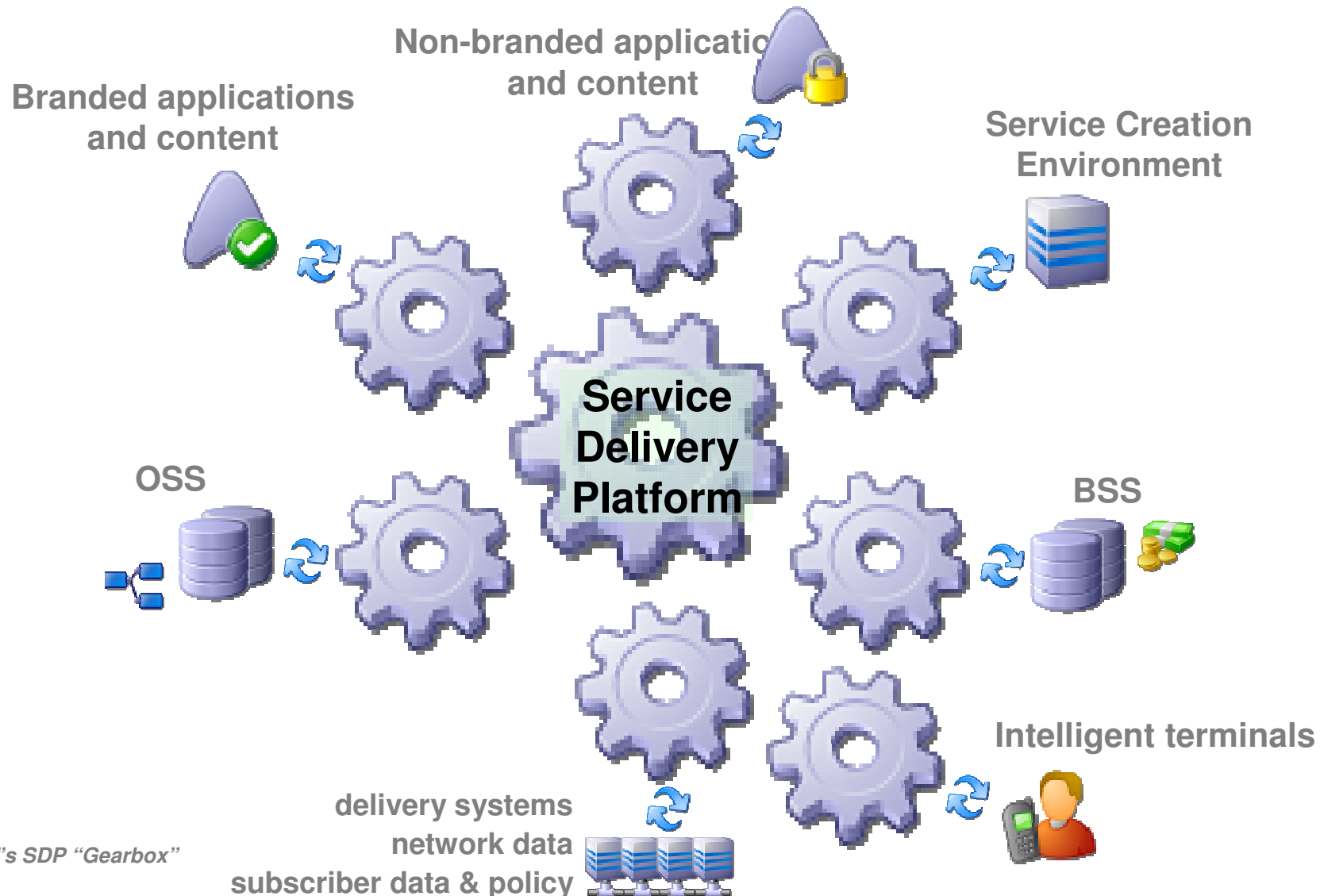
- Declining voice revenues
- High customer churn
- Demand for innovative, convergent services
- Addressing “The Long Tail”
- Reducing CAPEX & OPEX

Operators require a customised service delivery platform to meet these challenges

Common SDP Requirements

- **A complete ecosystem for the rapid rollout of voice & data services**
- **Support for New Market Drivers & Business Models**
 - Mobile Advertising
 - MVNO
 - Adult Content
- **Capabilities to drive service discovery & adoption**
 - Recommendation
 - Promotion
 - Personalisation
- **Scalable, Reliable Architecture**
- **Future Proof Service Delivery**

Complete SDP Ecosystem



Ref: IBM's SDP "Gearbox"

Mobile Advertising Requirements

Multimedia content



Adult content



Advertising



Operator Strategic Assets

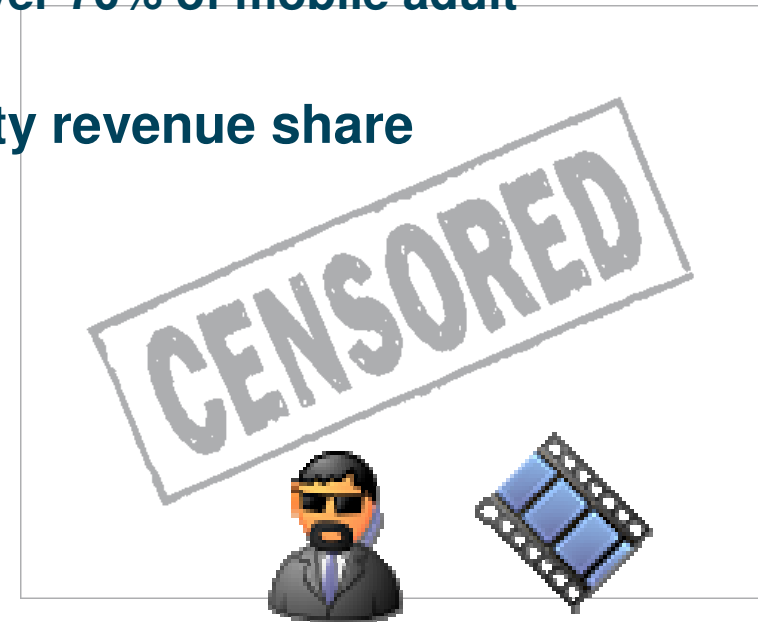
- Billing
- Device Management
- Location Information
- Presence Information
- Subscriber profile
- Barring
- Messaging

Customer



Adult Content Requirements

- Drive data usage and adoption of new services using adult content
 - Mobile adult content market predicted to grow from \$1.4 billion in 2006 to over \$3.3 billion by 2011 *1
- Evolve with network capabilities
 - Text-based services > high quality graphics > video
 - Video based services will account for over 70% of mobile adult content market revenues by 2011 *1
- Real-time charging for content – 3rd party revenue share
- Access to subscriber profile is critical!
 - Over 21 – full access
 - Over 18 – 'soft' content
 - Under 18 - blocked



*1 Source: Juniper Research

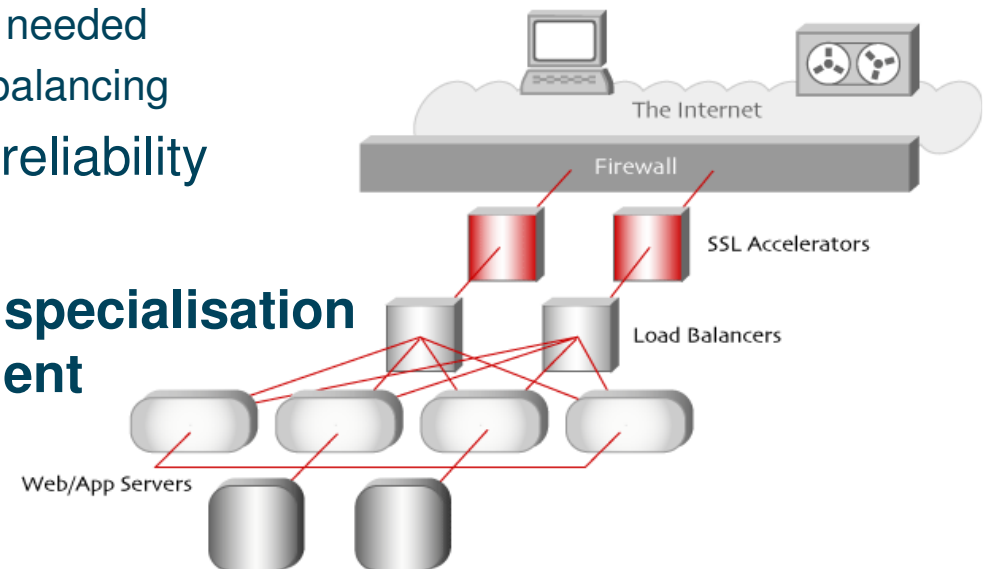
- **SDPs must support various MVNO categories**
 - Discount MVNOs – cheap pricing plans with basic voice & SMS
 - Lifestyle MVNOs – target niche market demographics
- **MVNO requirements include**
 - “virtual” infrastructure
 - Multi country support
 - no CAPEX – low OPEX
 - Flexibility
 - Multi-level revenue share and settlement

Current SDP offerings, on the large, do not support these scenarios

- **A complete set of Service Oriented APIs exposed on a common technology framework**
 - Messaging
 - Charging
 - Location
 - Presence
 - Subscriber Profile
 - Terminal capability
 - Marketing preferences
- **A single technology to provide a solution for all new external APIs**
 - A single entry point for all 3rd party access and a single technology for all APIs
 - API capability
 - Security (login, authentication)
 - Policy control (e.g. throttling, load control)
 - Privacy control (eg. Location Based, Presence privacy preferences)
 - One Common Business Process framework including e.g.
 - Partner (Sales House) Sign-up
 - Partner Management
 - Service/Campaign Provisioning

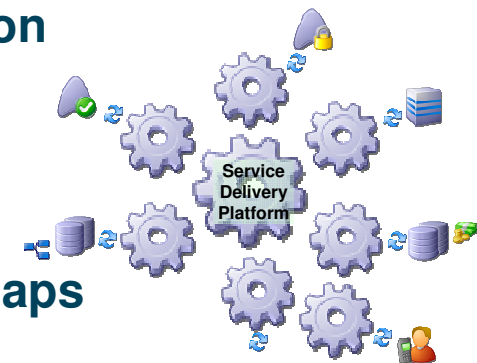
Scalability & Reliability Requirements

- **Product-based SDPs solve scalability problems of monolithic bespoke solutions**
- Individual products with highly scalable architectures
- Inbuilt scalability of SOA architecture
 - Pinpoint overloaded service enablers and increase capacity by
 - upgrading hardware ONLY where needed
 - introducing simple IP based load balancing
- Best-in-class products with proven reliability
- **Product-based solution ensures specialisation and continual product improvement**



Future Proofing Service Delivery

- Operators must protect their SDP investment through a future proof SDP that supports:
 - network evolution & future migration strategies
 - evolving subscriber needs
 - subscriber growth
- Requirements of a Future Proof SDP
 - Flexible service oriented architecture
 - Choice of components and enablers to evolve with requirements
 - Standard open interfaces for simple future integration
- The Solution:
 - Pre-integrated product based SDP with individual product and SDP architecture roadmaps



“Depth through specialisation, breadth through integration”

Pick & Mix Options to match Operator Requirements

- **Capabilities to support End-to-End Service Delivery**
 - **Partner Management** - rapid partner signup and policy enforcement
 - **Capability Exposure**
 - Messaging Gateways
 - Call control
 - Service Layer Enablers – Presence, Location
 - **Service Provisioning** – central provisioning
 - **Service Execution Environment** – standard app servers – Java, .NET
 - **Service Promotion** – intelligent recommendation, cross-sell & up-sell
 - **Service Discovery** – On Device Portals, Operator Portal
 - **Service Delivery** – multi-channel (voice, data, video)
 - **Content Management** – content acquisition, DRM
 - **Device Management** – OTA provisioning, device rendering
 - **Convergent Charging** – pre & post paid, rating, revenue share settlement
 - **Personalisation** - on portal, on device, in service
 - **Common User Profile** – consolidated access to service & subscriber data

The SDP Alliance Solution



The SDP Alliance Solution



**secure, open access to core
network capabilities**

**intelligent wireless portal
and personalized content
discovery**

**on-device portal for
discovery and usability of
content and services**

**partner management, 3rd
party integration and policy
management**

**convergent mediation,
convergent charging,
real-time rating**

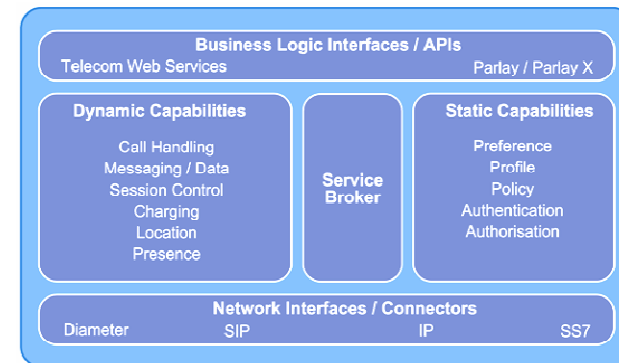
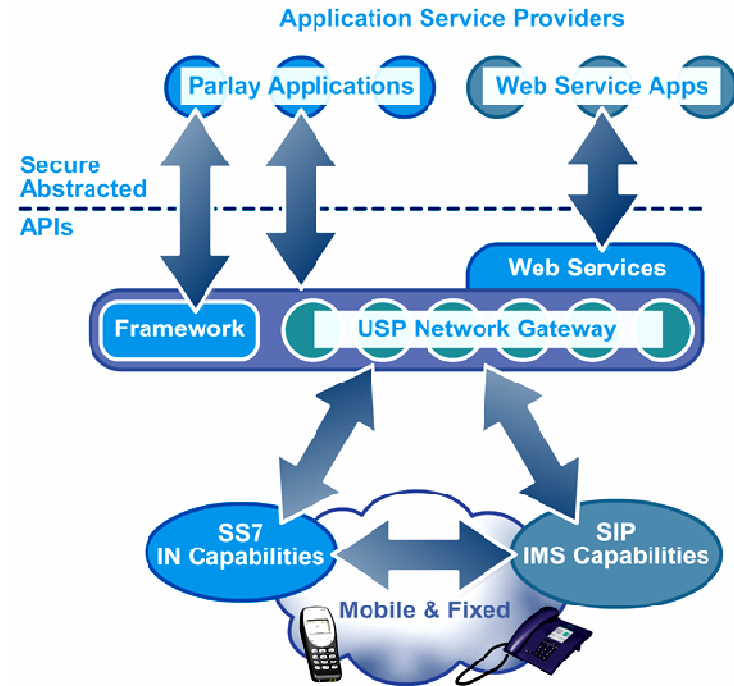
**content management,
content marketing, content
promotion**

**pre-integration,
customisation &
system integration**

- **Universal Services Platform**

Telecoms Web Services & OSA
Parlay/Parlay X Gateways

- Provides secure, open access to core network capabilities
- Telecoms Web services access for IT/Telecoms integrated environments
- Rapidly deploy new services across fixed-line, mobile and SIP/IMS networks

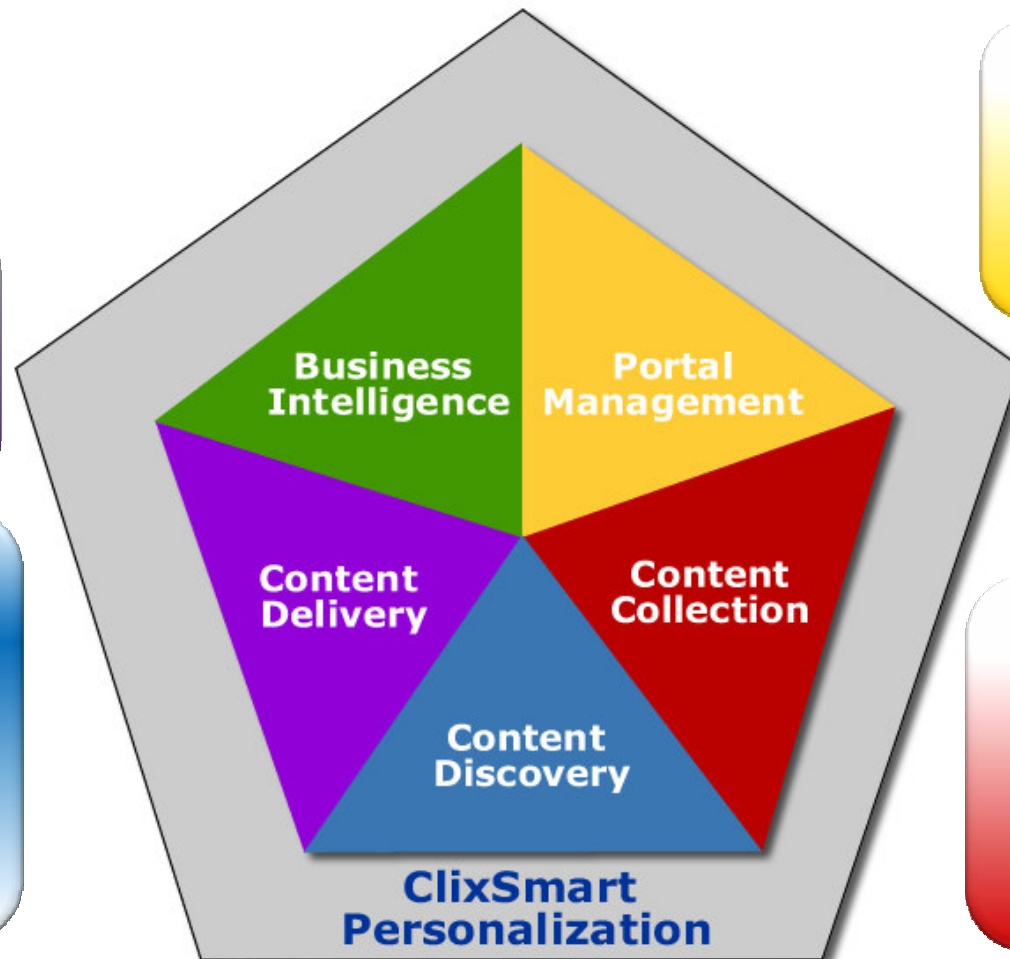


- ***ClixSmart Intelligent Portal Platform***

Live Dashboard
with statistics &
analysis

Increase
subscriber
awareness of
services

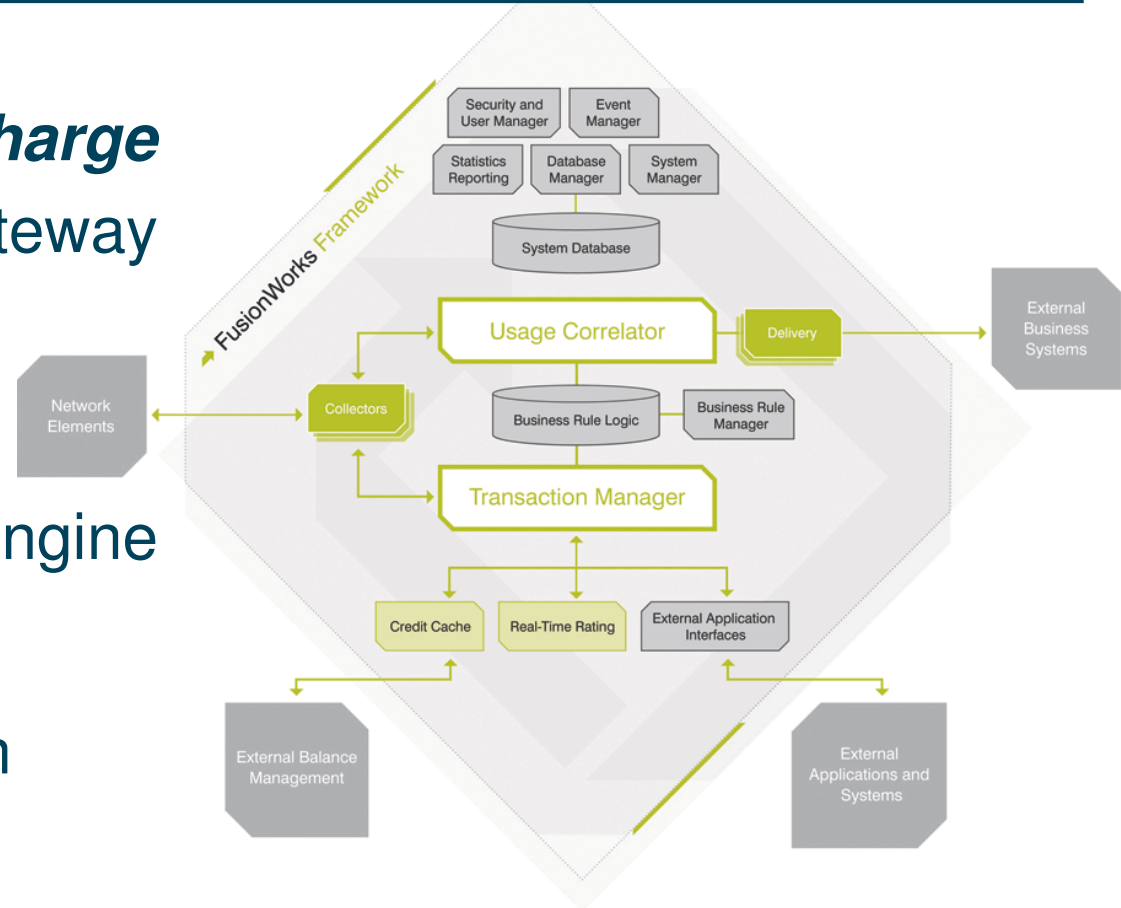
Implicit
personalization
and profiling
based on
Artificial
Intelligence



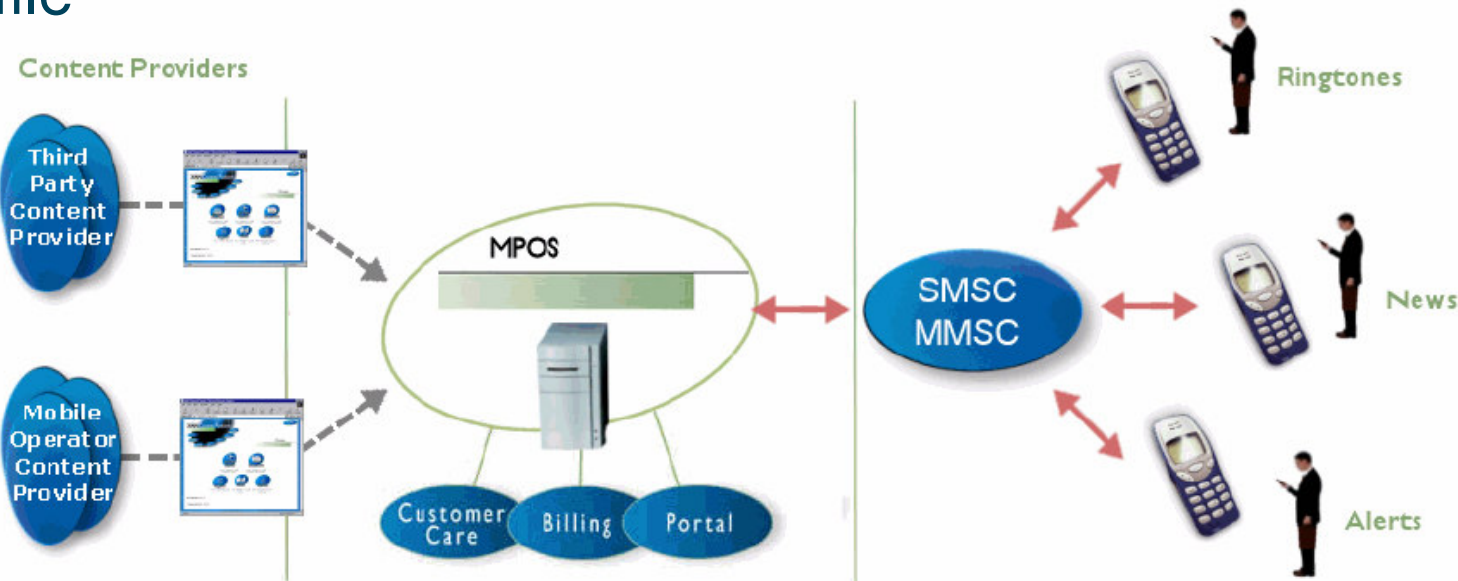
Rapidly edit and
publish
feature-rich
mobile portals
(multi-portals from 1
interface)

Ensure
consistent
branding &
personalization
of 3rd party
content

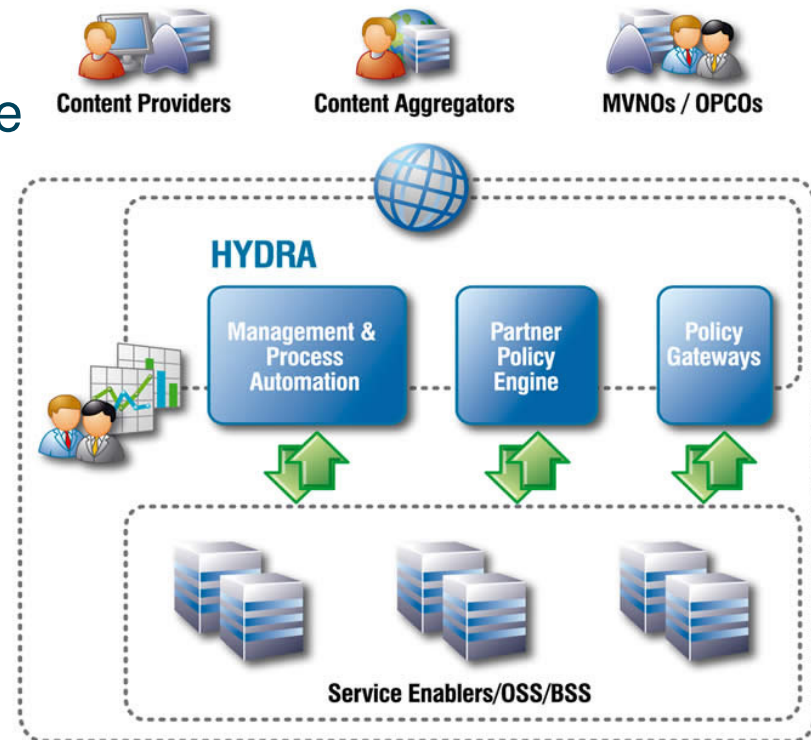
- ***FusionWorks ActiveCharge*** convergent charging gateway
- High performance transactional charging engine
- Real-time rating solution



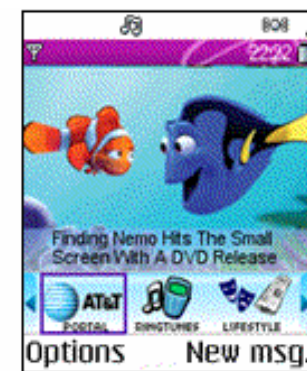
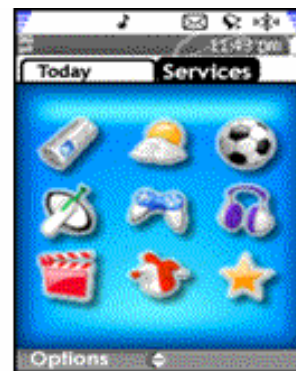
- **MPOS** Content Management System
- Market and sell to subscribers one-to-one basis
- Targeted push campaigns of mobile content
- Intelligent recommendations based on detailed subscriber profile



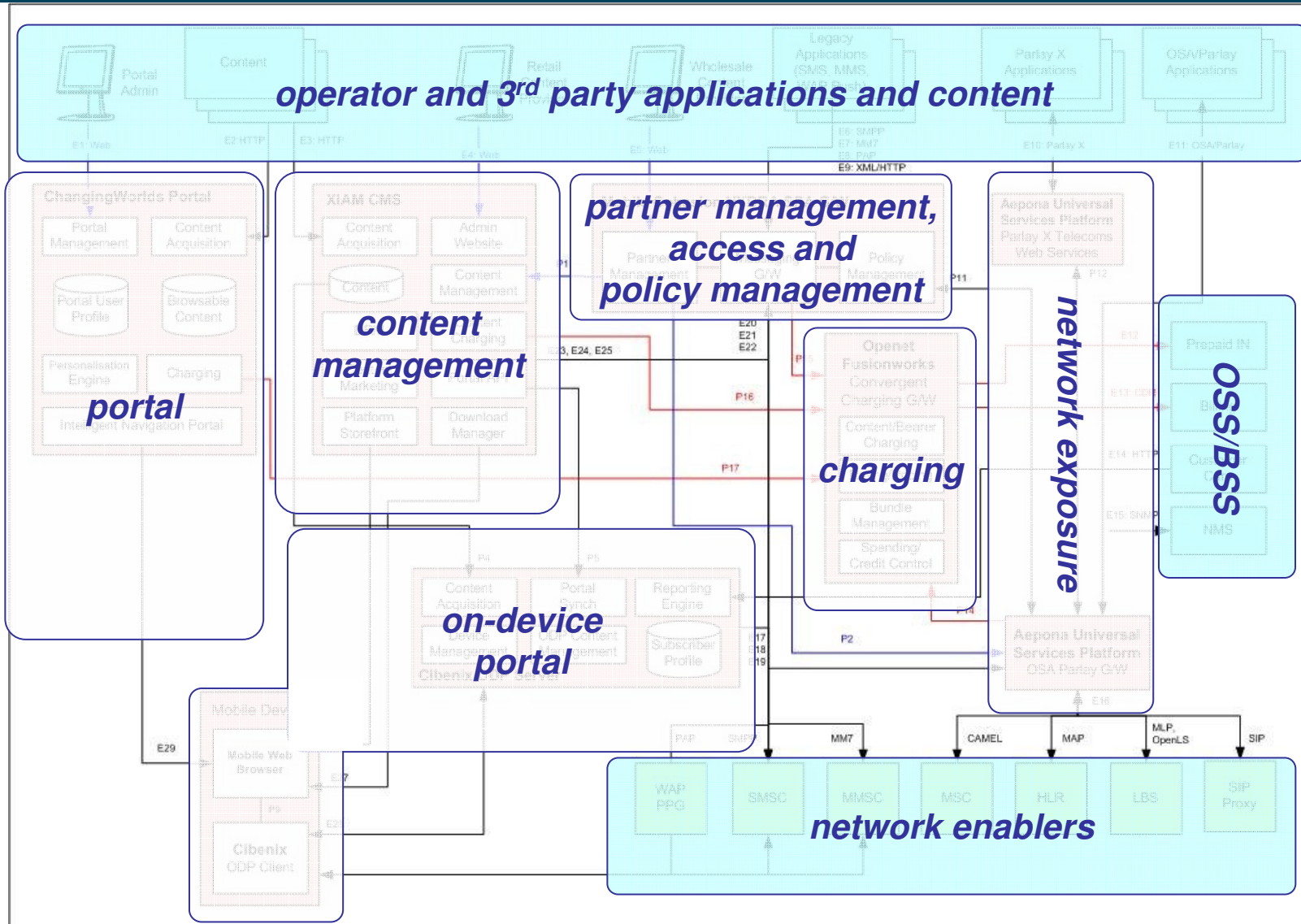
- **HYDRA** Partner Relationship Management
- Partner management of Value Added Service Providers
- Strengthens Operator Position in the Value Chain by allowing the implementation of a "smart pipe" strategy
- Reduce Cost of Partner Management and Integration
- Reduces time-to-market for new services
- Dramatically Reduces the Cost of Introducing New Services through Self-Service Technology and Automation



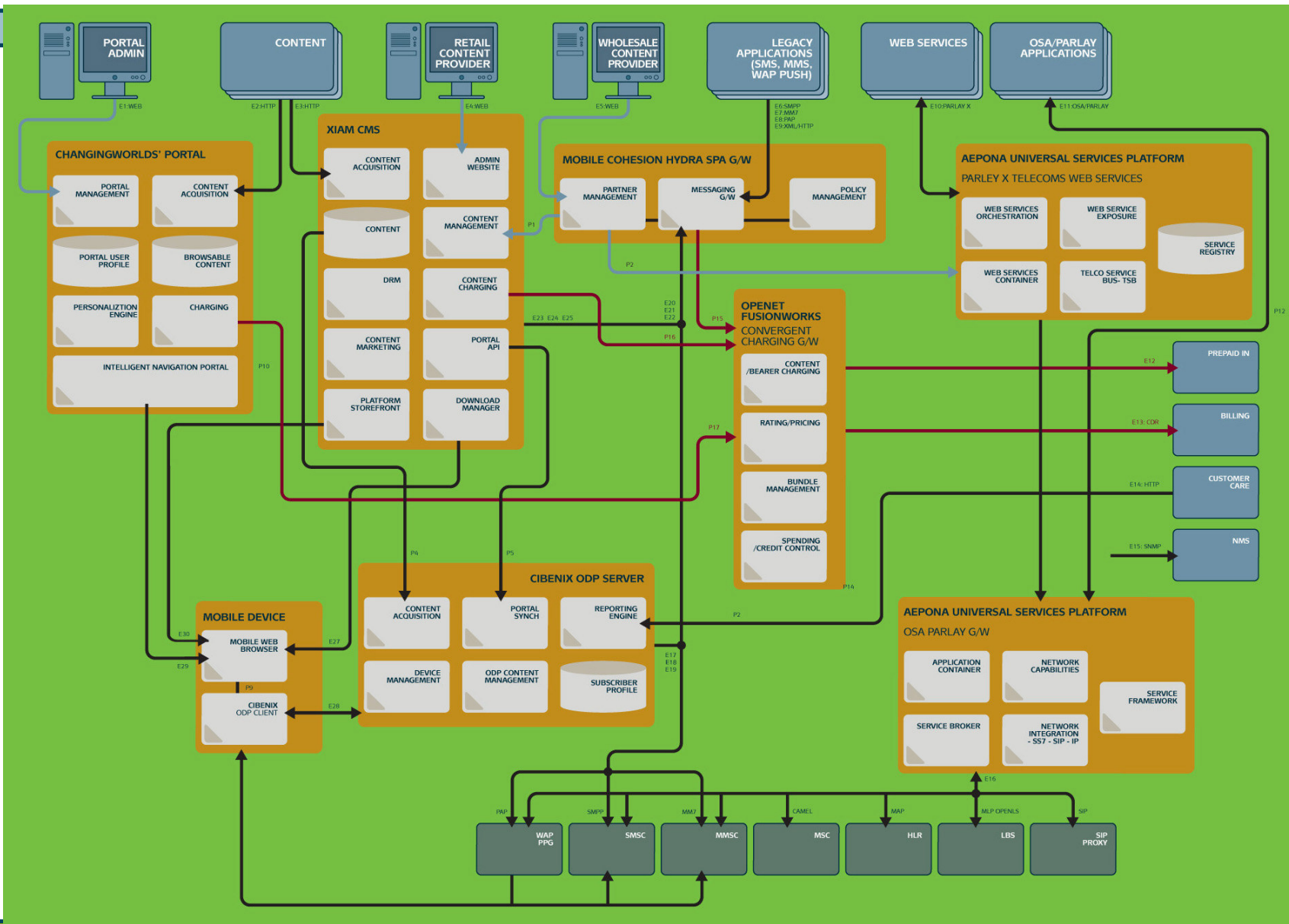
- **Cibenix** On Device Portal
- Improves service discovery through customised mobile UI
- Improves service promotion with teaser content silently pushed to handset
- Ringtones, Wallpapers, Video, Mobile TV, RSS



SDP Logical Architecture



SDP Alliance Current Architecture



A different configuration:

Mobile Advertising Architecture



Service Provider Network

Partner Management
Marketing



Mobile Advertising Platform

Advertiser and Content Partner Management & Settlement

Ad Server &
Campaign Manager

Dynamic User
Profile Server

Charging, Rating &
Revenue Share Settlement

On Portal
Advertising

CS Video
Ad Delivery

In-message
P2P Advertising

3rd Party Call
Click-To-Dial

ODP Server

On Device Portal
Advertising



Subscriber

Standard Open Interfaces for Simple Integration

- **Telecoms Web Services Exposure (Parlay X)**
 - 3rd Party Call Control
 - Multi-party Call Control
 - Presence
 - Location
 - Messaging
- **Internal Web Services Integration**
 - SOAP, XML/RPC, REST
 - NB: Loose coupling promotes flexible architecture
- **Easy-to-use Web-based Self-Service interfaces**
 - Partner signup, service provisioning, policy enforcement
 - Portal management
 - Retail content management
- **Standard Network Interfaces**
 - SMPP, MM7, PAP, MAP, CAMEL, SIP, MLP ...
- **OSS / BSS Interfaces**

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