OSS/BSS in future service delivery models

Rene Sugo
Group CEO – Symbio Networks
Who we are?

- Rene Sugo – Group CEO of Symbio Networks
- Part of the MyNetFone Limited public company group
- Symbio is Australia’s largest provider of VoIP wholesale and managed services
- Carrying 2 billion minutes of billed voice per annum
- Operating an in-house developed OSS/BSS solution
OSS/BSS Evolution: Stage 1

The OSS/BSS has previously been driven by the needs of the service provider and technology...

**Landscape**
- **Start of Deregulation**
  - PSTN resale the only ‘game in town’

**Customer Expectations**
- Low expectations
- Satisfaction based on cost saving

**Demands on OSS/BSS**
- Low, if any
- Manual forms-based provisioning
- Mark-up billing, dictated by the incumbent
OSS/BSS Evolution: Stage 2

... Still mostly driven by provider needs, but complexity starts to manifest.

Landscape
Introduction of new services:
• PSTN Resale
• Mobile
• Internet (Dialup, DSL)

Customer Expectations
• Still low expectations
• Access to more services
• Dealing with multiple providers
• Multiple bills

Demands on OSS/BSS
• Still low
• Mostly manual provisioning
• Mark-up billing
• Limited bundling
OSS/BSS Evolution: Stage 3

... the OSS/BSS starts to cater to the expectations of the customers.

**Introduction of new access means for service:**
- Voice – PSTN, Mobile, VoIP
- Data – DSL, Mobile/3G, WiMAX

**Customer Expectations:**
- Ability to choose technology based on cost/benefit
- Bundling to save costs
- Rapid reduction in cost (mobile caps, unlimited plans, cheaper access)

**Demands on OSS/BSS:**
- Increasing provisioning complexity
- Billing now bundle-based, consolidating multiple providers
- Customer self-service emerging
- Start of OSS/BSS outsourcing to specialists that can deal with the complexities
The demands on the OSS/BSS are increasingly driven by the customers’ expectations, which are in turn driven by the content and application choices available.
OSS/BSS Evolution: Stage 4

Landscape
- Separation of Access and Service layers:
  - Voice independent of access technology
  - Applications hosted in cloud
  - Voice just another application
  - Access is universal

Customer Expectations
- Access to everything, anywhere, anytime
- Simple portal-based self-service
- Purchasing content from Telco and OTT providers
- Some content commoditised – music, news, blogs, video, streaming, free to air TV globally

Demands on OSS/BSS
- Real-time provisioning
- Instant access to billing info
- Instant purchase of new services, cancellation of services, change of providers
- Unlimited B2B possibilities
- Modular feature charging, pay-per-use, on-demand, on-bill 3rd party providers
- Complex channel model for billing and provisioning
Current Environment

- Many value-added services included
- Highly integrated OSS/BSS
- Complex

Bundles integrated via ‘white-labeling’

Service Provider
- Cloud Storage
- Media Streaming
- Virtual PBX
- Virtual Fax
- Other Apps

Users

Value-added Service Providers
- OTT (Over the Top)
- Emerging markets
- Niche services
- Demographic-based niches
- Apps
- Business
- Others

- No integration
- Stand-alone & independent
- Customer willing to have multiple accounts/portals for niche services
Technology Value Erosion

Value Added Services
- Media Streaming
- Cloud Storage
- Virtual Fax
- Virtual PBX
- Security
- Other Applications

Basic Expected Services
- Voice - LNP & DIDs
- Data - unlimited
- Copper/DSL
- 3G/4G
- NBN

Expectation: Easily move between services
Technology Value Integration

OSS/BSS and Customer Service

Portal or API
- Value Added Services: Media Streaming, Cloud Storage, Virtual Fax
- Basic Expected Services: Virtual PBX, Security, Other Applications
- Voice: LNP & DIDs
- Data: unlimited
- Copper/DSL, 3G/4G, NBN

Portal
API
Example: Number Porting

Challenge

- Australian LNP Code not uniform
- Complex environment
- Different types of porting, multiple system to integrate

Customer Expectations | Symbio Solution
--- | ---
Real-time | ✓ Real-time LNP Checker & progress updates
Portal-based | ✓ Online Portal for self-service
Simple & straightforward | ✓ Same look & process regardless of porting type
Flexible | ✓ Out-of-zone porting
Voice is ‘vanilla’ – customers unforgiving | ✓ Quick delivery

+ Multi-level account structure enabling reseller markets

Outcomes

- New features can easily be added
- New carriers integrated
- Changes to the Australian TCP Code
Example: Virtual PBX

Challenge

- Enter Business phone market – PBX features in the cloud
- Installation – non-techy users, need easy setup
- Access – need reliable, fast internet for quality voice

<table>
<thead>
<tr>
<th>Customer Expectations</th>
<th>Symbio Solution</th>
</tr>
</thead>
<tbody>
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<td>Real-time</td>
<td>✓ Make adds, moves and changes in real-time</td>
</tr>
<tr>
<td>Portal-based</td>
<td>✓ Self-service via Online Portal, don’t need techs</td>
</tr>
<tr>
<td>Simple &amp; straightforward</td>
<td>✓ Pre-provisioned equipment for ‘plug &amp; play’</td>
</tr>
<tr>
<td>Flexible</td>
<td>✓ Change number of lines by up-/downgrading plan</td>
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<td></td>
<td>+ Feature-rich service with more features continually developed</td>
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</tbody>
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Outcomes

- Fast growth & positive feedback
- Integrated voice and data on one bill
- ‘Future-proof’ communications
## Future Service Provider Models

3 types of service providers will prevail:

<table>
<thead>
<tr>
<th>Base Network Service Providers</th>
<th>Content &amp; Application Providers</th>
<th>Service Aggregators</th>
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<tr>
<td>Do the ‘vanilla’ things like NBN, DSL, Mobile with basic voice and data on top</td>
<td>Sit in the cloud and service specific ‘value added’ customer needs, such music, movies, business apps etc</td>
<td>Have one or more of access or content natively, and aggregate other content/services</td>
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Examples

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<td>T WHOLESALE</td>
<td>Google</td>
<td>iiinet connect better</td>
</tr>
<tr>
<td>NBNCo</td>
<td>Twitter, Apple</td>
<td>myNetFone Your World, Connected</td>
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<tr>
<td>symbio NETWORKS</td>
<td>facebook</td>
<td>TRG INTERNET</td>
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<td>pipenetworks</td>
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### OSS/BSS Challenges

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<td>• Robust, full-featured</td>
<td>• Look &amp; feel of interface important</td>
<td>• Flexibility to integrate lots of sources</td>
</tr>
<tr>
<td>• Highly skilled team</td>
<td>• High brand appeal</td>
<td>• Powerful GUI for user interaction</td>
</tr>
<tr>
<td>• Powerful system</td>
<td>• ‘Northbound’ API</td>
<td>• ‘Southbound’ API capability to plug in VAS (value-added services)</td>
</tr>
<tr>
<td>• API – customer can integrate</td>
<td>• Easy white-labelling</td>
<td></td>
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Conclusion

- Service providers need to decide which provider model they want to pursue, to know what are the OSS/BSS implications.

Where do you fit in?
Questions?