Improvement of Customer Experience through Automated OSS Environment

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L N Namwoonde
Telecom Namibia
Key Focus Areas

- An overview of quality of customer experience with emphasis on customer service, looking at how to improve complaints, introducing ability to proactively detect how customers are experiencing a specific service (voice, video & data).

- A futuristic approach to improve the customer experience based on Operations Support Systems (OSS), focusing on both network and service performance management.
Introduction and Background

- “There has been a shift in how executives and leaders invest in the customer experience. Those that are providing the best customer experiences are making significant investments to place the customer at the center of every decision they make.” (Janelle Estes)

- “Customer experience is all about experience management. Great customer experience occurs when you exceed customer expectations in a palpable way. Poor customer experience occurs when you fail to meet customer expectations.” (Jay Baer)

- “Customers resent having to contact the operator repeatedly to get an issue resolved, having to repeat information, and having to switch from one service channel to another.” (Matthew Dixton)
Deliver Best Experience Across Customer Lifecycle
Where Operator’s are

**Fault Management**
- State monitoring
- Failure logging
- Tracking
- Reporting

**Network Operation Centre (NOC)**

**Configuration Management**
- Device config.
- Version control (compare, apply, rollback, backup)

**Security Management**
- Access control
- Attack detection & alert

**Performance Management**
- KPI monitoring
- Data collection
- QoS
Where Operator’s are

Sample KPIs for NPM:
- Bandwidth
- Throughput
- Packet loss
- Latency
- Delays
- Jitter
- Error rate
- Reliability
- Security

Why would customers complain poor experience of service?
Where Operators want to be
How can Operator’s achieve where they want to be

Service Quality Management

 Perception

 SQM

 Monitoring

 Optimisation

 Data Collection Layer

 - Raw data from network devices

 Data Storage Layer

 - Stores the data in DB

 Data Analysis Layer

 - Calculate QoE & KQI
 - Based on the set KQI modeling & report

 - End-to-end SQM Platform
 - Service quality problems
 - NPM focuses on KPIs of NEs or individual network
 - KPIs of each specific domain is excellent
How can Operators achieve where they want to be?

**Customer Experience Management**

Which Metrics should we focus on?

**Network Centric**

- **KPI**
  - Network-facing
  - Measures a specific aspect of the performance of network resources
    - OSS KPIs
    - Faults & Alarms

**Service Centric**

- **KQI (PSPU)**
  - Service-facing
  - Indicate service quality
  - Measures a specific aspect of the performance of the service
  - Key to associate subjective satisfaction and objective service & network quality

**Customer Centric**

- **QoE**
  - End user-facing
  - Reflect user experience for a specific service
  - NPS/CSAT associate intangible satisfaction & loyalty and tangible business value

KQIs bridge the gap between Network-Service-Customer Experience
How can Operator’s achieve where they want to be

**KQI Samples**

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<tr>
<th>Voice</th>
<th>SMS</th>
<th>WEB</th>
<th>Streaming</th>
<th>Email</th>
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<th>WhatsApp</th>
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<td>SMS Origination Success Rate</td>
<td>Page Response Success Rate</td>
<td>Video Streaming Start Success Rate</td>
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How can Operator’s achieve where they want to be

Capturing Insight & Measuring Customer Experience

End User
- Subscriber...
  - User Insight & Behavioral
  - User segmentation, Usage
- Location...
  - Accessed Location
- Real Time
- Per Service Per User (PSPU)
- Big Data Analytics, Machine Learning, Predictive
- Fast Network Problem Demarcation

End Device
- Terminal...
  - Terminal Insight & Penetration
  - Popularity & Trend
  - Traffic, Usage
- Experience...
  - Perceived Service Quality (KQIs/QoE)
  - Influenced Service & Problem Cause
  - NPS (loyalty), Churn

Network (OSS & BSS)
- Service...
  - Service Insight & Distribution
  - Popularity & Trend
  - Traffic, Usage
- Time...
  - Terminal, Service, Traffic
  - Busy Hour Identification

ISP/PSTN (Core)

How can Operator’s achieve where they want to be

- **Processes**
  - ✓ Procedures

- **People**
  - ✓ Skills set (IP, IT, Security)
  - ✓ Attitude
  - ✓ competence
Imagine how Customer Experience would be with such systems, processes and people in place.
Thank you

Letty Namwoonde
Telecom Namibia
E-mail: namwoondel@telecom.na
Company website: www.telecom.na