Insight of NGN Deployment

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- NGN Network Transformation
- NGN Network Migration
- Evolution From PSTN to IMS
- Case Studies
 - Brunei Telbru: World First Commercial NGN Deployment
 - Singapore SingTel: From C5 Consolidation to ALL IP
- Summary

Drivers for Network Transformation

- Obsolescene of TDM technology.
- Technology shift from circuitswitch to packet-switch.
- Emerging access technologies
- Open standard and architecture.
- 4 Technology

1 Market

- Strong competition
- Decline in fixed line subscriber.

Drivers

- Convergence in services
- Convergence in access network
- Convergence in Fixed and Mobile.
- Convergence in telecommunication and computing.

Convergence

3

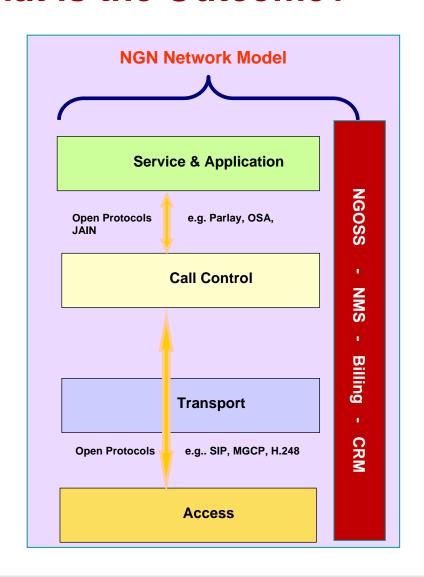
Competency

2

- Limited growth in PSTN
- High OPEX
- Long time to market
- Lack of service portfolio



What is the Outcome?



New Service Opportunity

New Network Architecture

New Business Competency

New Network Flexibility

New Transport Efficiency

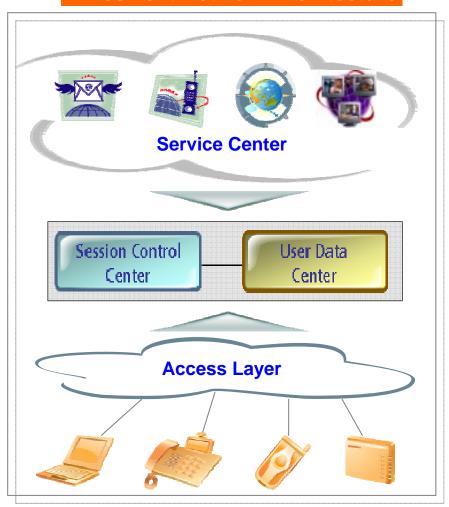
New Network Operation

New Organization Structure



Requirement of Network Transformation

A Resilient Network Architecture



Requirements of Transformation











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Application of NGN

Long Distance Trunking & C4

- Deploy NGN to replace the Long-Distance VOIP Trunking and C4
- Transparent to the subsriber
- Reduce cost of transmission

VAS Center

- Integrate the NGN platform with Next Generation VAS center
- Provision more exciting and usefl Value Added Service
- Interconnect with 3rd party ASP via open API

Application of NGN in Fixed Network Operator

VoBB for BB user

- Introduce IAD, SIP phones and video phones to the network
- Make use of NGN to offer voice service to BB user

C5 Migration

- Deploy AG for new expansion site
- Start the NGN C5 migration at small scale
- Increase the scale of NGN C5 migration step-by-step
- Conduct Pre-cutover to ensure smooth migration

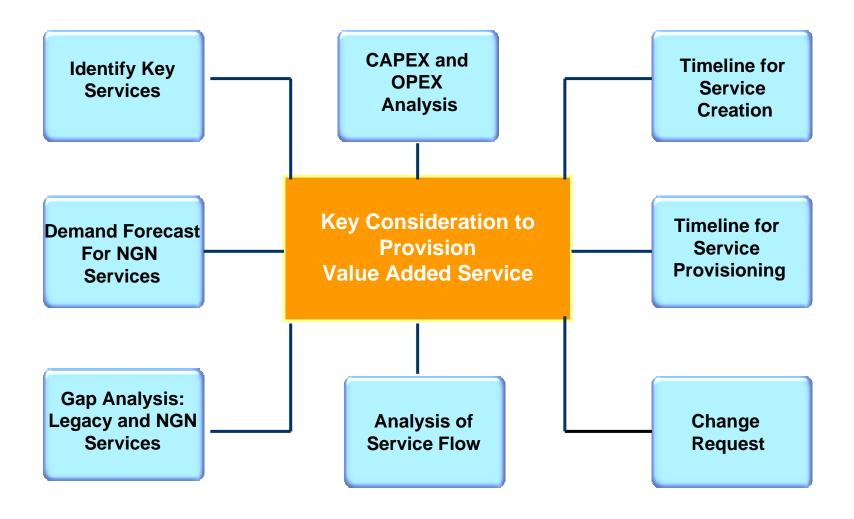


Defining NGN Blueprint

Layout Key NGN Conduct Numbering Network Elements Planning NGN Blueprint Partner and **Design and Plan** Contractor is Critical to the Network Selection **Guarantee the** Successfulness **Analysis of** Define scope of work of the NGN Interconnection for Operator, Vendor **Deployment** and Contractor with Legacy Network **Analysis of** Installation and **Subscriber Database Commissioning Plans** & Format Conversion **Analysis of Different Network Migration Transformation** plans **Scenarios**



Key Consideration of VAS Provisioning in NGN



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General Migration Principles

Investment Protection

- Investment protection in fixed voice field
- Least impact on interworking elements

Service Inheritance

- Network migration transparence
- Least changes in services usage

Based on Softswitch Functionalities Reservation

Smooth Implementation

- Step-by-step deployement
- Minimum project implementation difficulties

Continuous Development

- Convergent of network resources
- Sharing of network resources



Tailor-made Network Solutions

PTSN Transformation

- Mature and stable Voice over IP solutions
- Reduce OPEX by 30%~50% compared to

PSTN







Call Server

MSAN

Network Intelligence Solution

- Increase whole network service competence and shorten time to market
- Abundant VAS, such as CRBT,WAC,NP, etc.
- Centralize O&M, reduce OPEX



Call Server VAS Center GW

SIP AS Solution

- Provide MM services, increase revenue, such as video conference, IP Centrex, MRBT, etc.
- Flexible application and services can be introduced with just add on SIP AS







SIP AS

FMC Solution

- Unified call control center for FMC, convergent applications, such as VCC, etc.
- Provide ICT services, such as IM, Presence, etc..



Call Server IMS Core

VAS

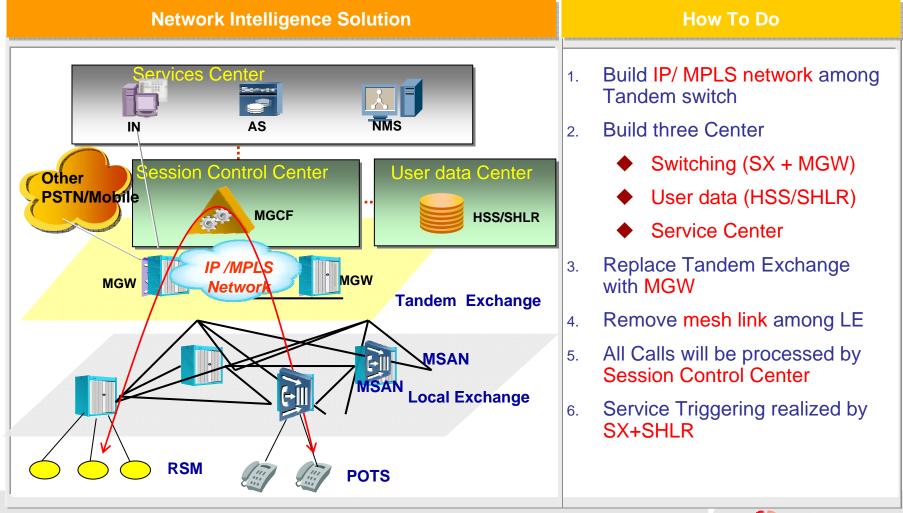
SIP AS

Center

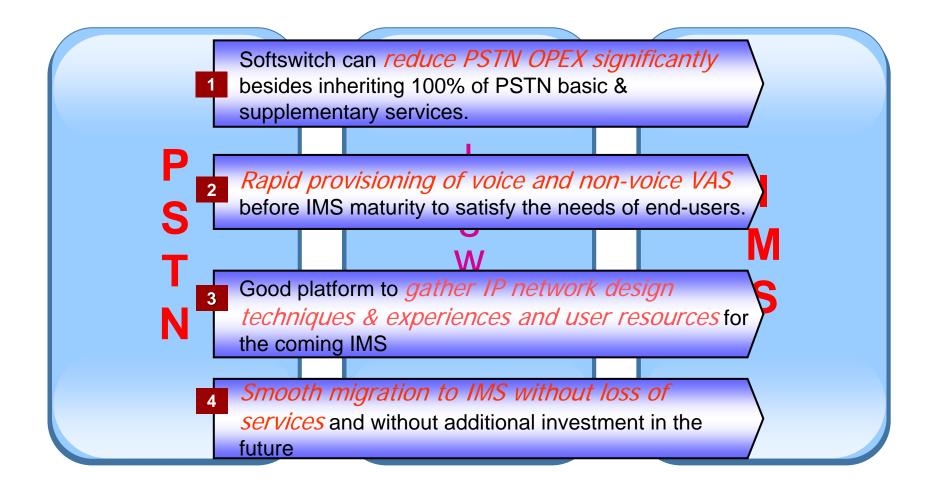


Where Do We Start Off

Start with from a smooth and cost-effective way

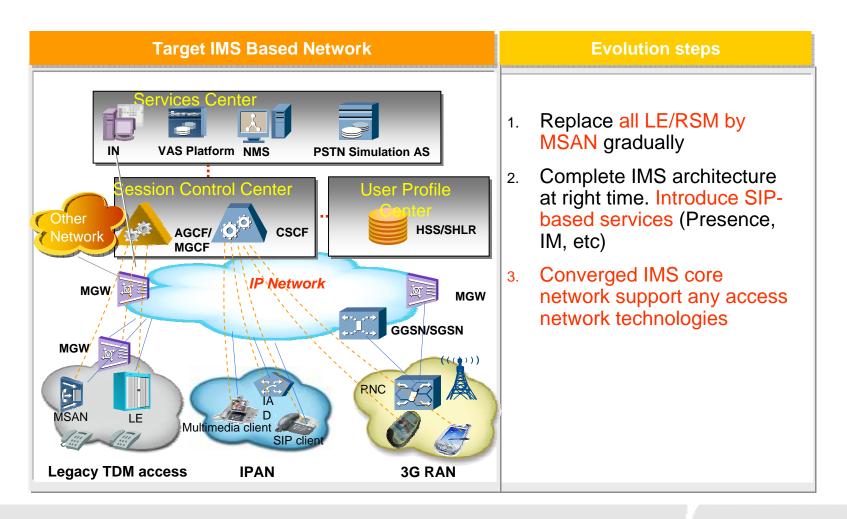


Softswitch, a Bridge Between the Preceding & the Following

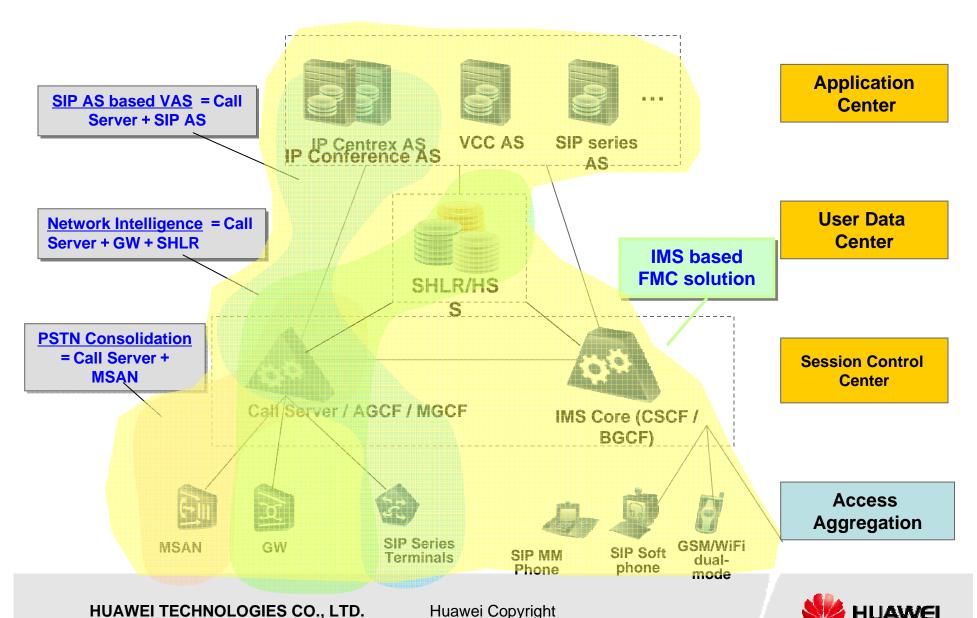


On the Way to Complete IMS

The ultimate goal of network transformation is IMS-based converged network



Future-oriented Network Transformation Solution



Service Innovation based on FMC Architecture

Full Convergence

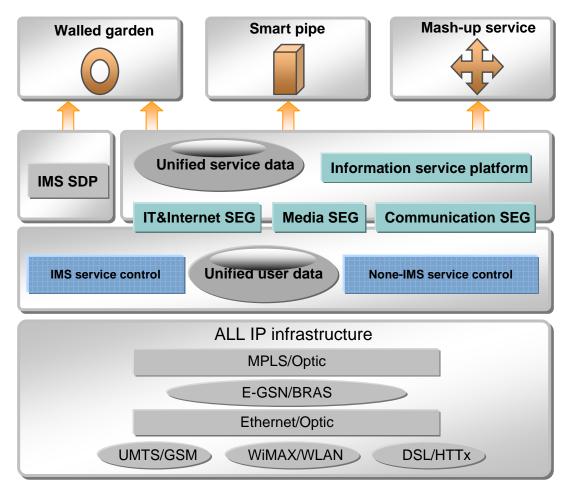
- FME: Fixed Mobile Convergent Experience
- FMI: Fixed Mobile Convergent Infrastructure
- FMN: Fixed Mobile Convergent Network

Open & Innovative

- Fast tailor made developing
- Standard interfaces
- Open eco-system
- Innovative services

Smooth Migration Path

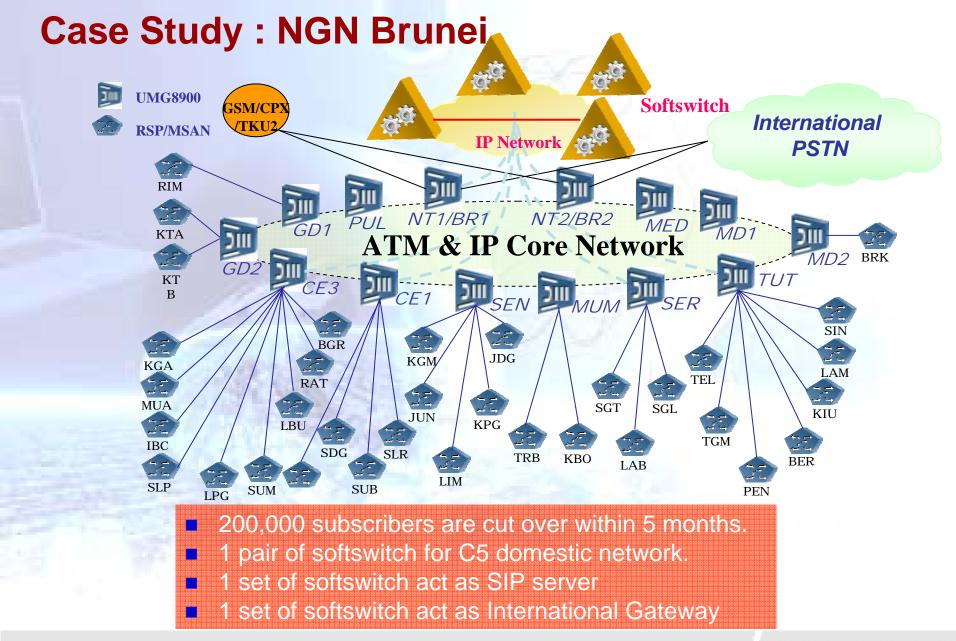
- Unified Platform strategy
- Mobile Softswitch migrate to AGCF/MGCF/CSCF
- HLR\SHLR migrate to HSS



SEG: Service Exposure Gateway



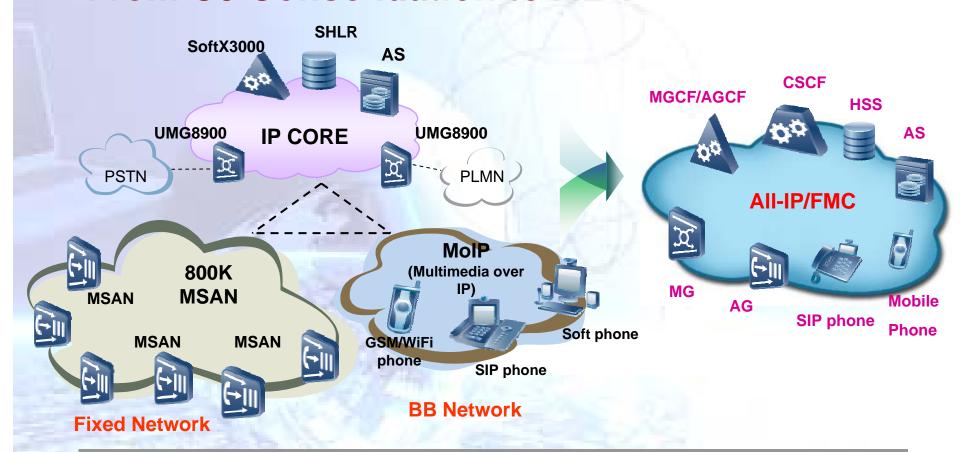
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Case Study: SingTel

- From C5 Consolidation to All IP



- Started with 800K MSAN replacement of old TDM switches
- Introduce central user database to enable fast deployment of new VAS



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Summary

Can We Ignore NGN?

Market

- POTS is still the primary revenue generator.
- The most lucrative users still remain in POTS.
- POTS is still popular because it is widely available and affordable.

Network Platform

- NGN is a reliable and stable platform for network transformation.
- It has passed through 5 years of simulation, testing, trial and upgrade.

Differentiated Services

- Flexible platform to create and provision a broad array of VAS.
- Various exciting NGN applications are ready to market.



Summary

Can We Ignore NGN?

Business Planning

- The risk of migration has been thoroughly assessed and minimized.
- NGN network transformation is supported by successful commercial business case from established telecoms.
- NGN migration guarantee smooth service continuity and the subscriber data profile can be fully retained.

Competency

- Reduce the CAPEX and OPEX of the network.
- 100% inherit the traditional PSTN's basic and supplementary services.
- Innovative voice and non-voice services ensure higher quality of experience
- NGN is the most appropriate choice to resolve difficulties currently confronted by operators.
- Network operator's investment in NGN will be protected in IMS smoothly.





Thank You

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Huawei's contract sales reached US\$8.2 billion in 2005, more than 58% of which was from international markets.

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