Cover Story

Value operations through BEST Networks based on user perception

Huawei offers a diverse lineup of solutions to help carriers build “BEST (beneficial, efficient, service-oriented, and transformative) Networks,” whether measured by network rankings, consistency, value for money, or pretty much any other criteria.

As the MBB era dawns, a rich variety of mobile services is emerging and user demands for better network quality and superior service experience are rising. End-to-end (E2E) service experience in complex scenarios will be crucial to telco business success, directly impacting revenue. According to a Yankee survey, 64% of European mobile users have network quality as top priority when choosing a carrier, with over 10% willing to pay more for a better service experience. Third-party or crowdsourcing test results from the likes of P3 and Speedtest greatly influence users and put tremendous pressure on carriers by comparing network performance. Thus, telcos are increasingly resorting to building what Huawei dubs "BEST Networks."

Differing goals for BEST Networks

No two telcos are alike, and neither are their needs. Major carriers have all realized the importance of user experience, but telcos build BEST Networks with a variety of goals in their mind. One telco might expect higher Speedtest rankings. Another might be more interested in value for money. This makes the BEST concept not necessarily a matter of best in the world (though it could be), but BEST for you.

Value & user-perception

Huawei sees a quality network as an evolvable network that balances the customer’s ROI and customer experience while ensuring profitability – a network that enhances telcos’ competitive edge. Huawei has developed the BEST concept (beneficial, efficient, service-oriented, and transformative) for quality network construction, based on the ideas of "value operation" and "network construction oriented around user perception."

Benefits

Facing intense competition with OTTs and with each other, telcos are seeing declines in average revenue per user (ARPU) and sluggish
growth. Huawei suggests that telcos increase revenues and maintain profits through user migration and new service adoption.

Huawei has developed customized user migration solutions for different telcos to help boost both the subscriber base and traffic consumption. Optimization can break the bottleneck at the network side, and help migrate users as efficiently as possible by optimizing network handover parameters, adopting software features, refarming for better spectrum utilization, and optimizing indoor coverage.

User behavior analysis and business consulting based on expert advice and a global benchmark database can also help. Huawei can help telcos create optimized terminal/subsidy tariff packages that cater to local demands, which can stimulate new users to try data services and encourage existing users to consume more. Such consumption encouragement will eventually drive user network migration. For instance, in 2013, Huawei helped a certain carrier optimize its “user camping” strategy. In just three months, the telco’s LTE user base increased by a staggering 543%, with LTE traffic consumption surging 741%.

**Efficiency**

Telcos all face intense competition and high coverage demands in the face of limited capital. How can they guarantee coverage of value areas and value customers? Huawei recommends our SmartCAPEX solution for targeted network construction.

SmartCAPEX uses automated tools to collect detailed network data and conduct multi-dimensional association analysis, and develops network investment and construction schemes based on site value. SmartCAPEX helps telcos identify cells, sites, and network grids with the greatest value, and uncovers potential sites often neglected in traditional network evaluation. The solution maximizes ROI for each new site, making sure money is spent in the right place.

SmartCAPEX helped an African carrier implement precision network construction, increasing the carrier’s network traffic by 30% in three months, with traffic at certain new sites twice as high as the average for existing sites.

What’s more, Huawei’s service operations centers (SOCs) support service quality evaluation, user satisfaction monitoring, service quality monitoring, and fault location, allowing for proactive E2E service quality optimization and management. SOC drives network/ market/marketing departments to coordinate effectively and solve problems, guarantee user experience, market more precisely, and make O&M more efficient.
Solutions. We can help telcos test the KQIs of OTT video and locate network problems, effectively shortening buffering and reducing freezes. Our evolved multimedia broadcast/multicast service (eMBMS) solution helps telcos integrate current networks with new solutions, activate E2E features, aggregate the industry chain, and design new business models. Our value growth solution (VGS) optimizes user experience by enabling traffic consumption notification, video acceleration, balance query, and new package subscription.

During network optimization, Huawei can perform KPI/KQI monitoring and assessment of the network and its services, and conduct E2E network optimization of key areas, which involves coverage evaluation, network rate/neighboring cell optimization, interference troubleshooting, and transmission layer optimization to guarantee service E2E QoS.

A Huawei survey has found that 1Mbps can guarantee excellent service perception for gaming and web browsing, while 3Mbps can effectively improve service experience for HD video and high-speed transfer. Thus, we proposed the concept of "xMbps anywhere-anytime" to realize on-demand network resource allocation.

In 2013, Carrier Y in Southeast Asia lagged behind its competitors in UMTS network construction, and wanted to deploy UMTS2100. Huawei’s "xMbps anywhere-anytime" solution matched their goals perfectly. After complete network performance evaluation and accurate solution planning, a group of solutions covering carrier expansion, six-sector deployment, and new site planning was implemented. In 2014, Carrier Y achieved its goal of 2Mbps anywhere-anytime, making for a clear advantage in market competition. Some carriers attach great importance to

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**Service experience**

Video services are becoming basic telco services, but they require high bandwidth, low latency, and few interruptions; this is very hard to guarantee from end to end. Huawei is dedicated to helping customers to build quality mobile broadband (MBB) networks. As mobile video shifts from 360p to 720p to 1080p, it has become almost compulsory for telcos to keep video buffering time under three seconds, and ensure zero interruptions. High bitrate video services pose an unprecedented challenge to E2E network capability, placing new requirements on the intensive coverage and signal quality of wireless networks and the fiber to the site (FTTS) and architecture of backhaul networks.

Huawei provides a range of mobile video solutions. We can help telcos test the KQIs of OTT video and locate network problems, effectively shortening buffering and reducing freezes. Our evolved multimedia broadcast/multicast service (eMBMS) solution helps telcos integrate current networks with new solutions, activate E2E features, aggregate the industry chain, and design new business models. Our value growth solution (VGS) optimizes user experience by enabling traffic consumption notification, video acceleration, balance query, and new package subscription.

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**Figure 1 Huawei “BEST Networks” concept**

- **Benefit**: Increase revenues and maintain profits through user migration and new service adoption
- **Service Experience**: "xMbps anywhere-anytime" to realize on-demand network resource allocation
- **Efficiency**: Adopt SmartCAPEX solution for targeted network construction
- **Transformation**: Protect investments and support new services, particularly support multi-network coordination and smooth evolution
third-party testing, as websites like Speedtest can have a great influence over end users. Poor performance on Speedtest could compromise a telco’s brand. Speedtest utilizes spontaneous crowdsourcing for testing, which can better reflect real service experience than traditional drive-tests. Huawei has developed a crowdsourcing testing optimization solution to help carriers improve their rankings. In 2014, Huawei successfully helped a Middle Eastern carrier raise its Speedtest ranking for its mobile and fixed broadband to the global top-five.

**Transformation**

BEST Networks must protect investments and support new services, so they must support multi-network coordination and smooth evolution.

**Market service coordination:** With multi-network coordination, different services can be designed for different user groups to deliver varied service experience. The service experience can also be improved to enhance the loyalty of high-value users.

**Hybrid networking & technical coordination:** For multi-standard/multi-service coordination, the building of BEST Networks with a superb user experience depends on network standards and services that maximize ROIs.

**Network architecture & technology evolution:** Solutions must allow for long-term evolution, with regular network upgrade and transformation carried out in line with industry trends.

For example, as a basic communication service for next-gen mobile networking, voice over LTE (VoLTE) will play an increasingly important role in future business models. Thanks to VoLTE, telcos can retain users through voice and data services and continuously enjoy the advantages of their substantial phone-number resources.

Therefore, BEST Networks must be capable of evolving to support VoLTE.

Based on the needs of future network evolution, Huawei leverages its expert resources, professional processes, and tools & platforms to deliver highly-efficient network integration, verification, and implementation through evaluation and indoor/outdoor and multi-standard/multi-band/multi-vendor coordination. Huawei is committed to carrier business success through BEST Networks that support smooth evolution.

**BEST Networks empower telcos**

Huawei has created a set of BEST Network assessment standards for O&M processes & platforms, equipment health, network capacity, coverage, interference, and service quality. Telcos can measure their networks against them to find network problems and use the O&M center to solve them, realizing quality assurance for key services.

Executing the BEST Network strategy of “value operation and network construction oriented towards user perception,” telcos can concentrate their limited funds and resources on value areas and value customers. BEST Networks enable telcos to conduct refined operation, enhance their brands, and stay ahead of the competition in an increasingly homogeneous market.