



## High-Performance Unified Service Control



# Turning Service and Network Efficiency into Improved Profitability

**Industry:** Telecommunications  
**Geography:** United Kingdom

### Background

The "3" brand represents several mobile phone networks operating around the globe in Australia, Austria, Croatia, Denmark, HongKong and Macau, Indonesia, Ireland, Italy, Sweden, and the United Kingdom. 3-branded networks operate 3G mobile technology and as of 2008, had a subscribership of registered 3 customers worldwide that numbered over 19 million.

3 UK is part of the Hutchinson Whampoa (HWL) group of companies and is licensed to provide wireless service in the United Kingdom.

3 UK undertook one of the fastest network rollouts in the history of the United Kingdom and met regulatory requirements to provide service three years ahead of schedule. Within the first three years of its operation, "3" acquired over 3.5 million subscribers.

Shifting revenues from flat-rate and lower-margin voice services to higher-margin mobile data services has long been a corporate objective and priority for 3 UK. As early as 2008, 3 UK was shown to be one of the leaders in

highest average revenue per user for mobile data among carriers around the globe. Moreover, 3 UK also registered one of the highest percentages of 'data to voice' revenues as well.

Today, 3 UK is the largest mobile carrier in the United Kingdom with a high-speed mobile broadband network that covers 91% of the UK population and is forecasted to reach more than 98% of the population by the end of 2010. More information on the company can be found at:

[www.three.co.uk/Company](http://www.three.co.uk/Company)

### Challenge

As subscriber and usage volumes for mobile services continued to grow at an exponential rate, 3 UK realized that to be successful in maintaining and improving its performance against its corporate objectives, it was essential for the company to:

- Increase revenue through a real-time value-added service focus
- Reduce time-to-market for new services
- Improve availability to improve customer experience
- Create infrastructure flexibility and efficiency
  - Eliminate siloed systems in the network to improve flexibility and efficiency
- Create common "Service Control" for charging and access for voice, data and messaging

- Integrate messaging to billing systems
- Expose common services to other systems
- Create a data cache for real-time usage
- Lower the total cost of operation of their network
  - Use commodity hardware and open systems
  - Build In-house / off-shore capabilities

Unfortunately, the company's existing systems were relatively slow and, due to inflexibility, it was expensive to deliver even minor changes to services. It was clear that a significant up-grade in capacity and capability was imperative.

**Selection**

As 3 UK surveyed the market for a high-performance unified service control solution, it became evident that the combined requirements for 1) flexibility to enable rapid response to market demand, 2) high performance, 3) enhanced network efficiency and 4) cost effectiveness quickly reduced the field of contenders. 3 UK awarded the project to TIBCO based on TIBCO's unique solution architecture that created a unifying layer that:

- Integrated the disparate elements of the company's network
- Was built upon underlying technology that delivered network-grade availability and reliability throughout the solution
- Utilized more affordable commonly available hardware
- Eliminated the need for multiple additional data bases

**Solution**

TIBCO delivered 3 UK's solution for a high-performance unified service control on Sun T2000 servers with Solaris10OS. The TIBCO solution delivered the following capabilities:

- Real-time integration to billing, subscriber profile and network
- Operation interface with NMS

- Generic service logic that is configurable and integrate the network with IT systems
- A high level service creation environment
- Re-usable elements
- Generic access control for messaging
- Highly available cache for profile, location, and presence for real-time execution
- New messaging services
- No first delivery load on SMSC
- Virtual BMR
- Fraud detection with credit checks, adult verifications
- Request routing
- CDR, audit, statistics

With the integration of messaging to 3 UK's real-time billing system, the company would be able to experience a considerable improvement in the performance and reliability of its messaging architecture. Additionally, the generic access control and generic service logic would reduce the company's reliance on external network vendors.

Furthermore, TIBCO's high-performance unified service control solution enabled rapid development and testing, and the ability for 3 UK to replace its "bespoke" application, an aging integration systems with a history of revenue leakage.

**Results**

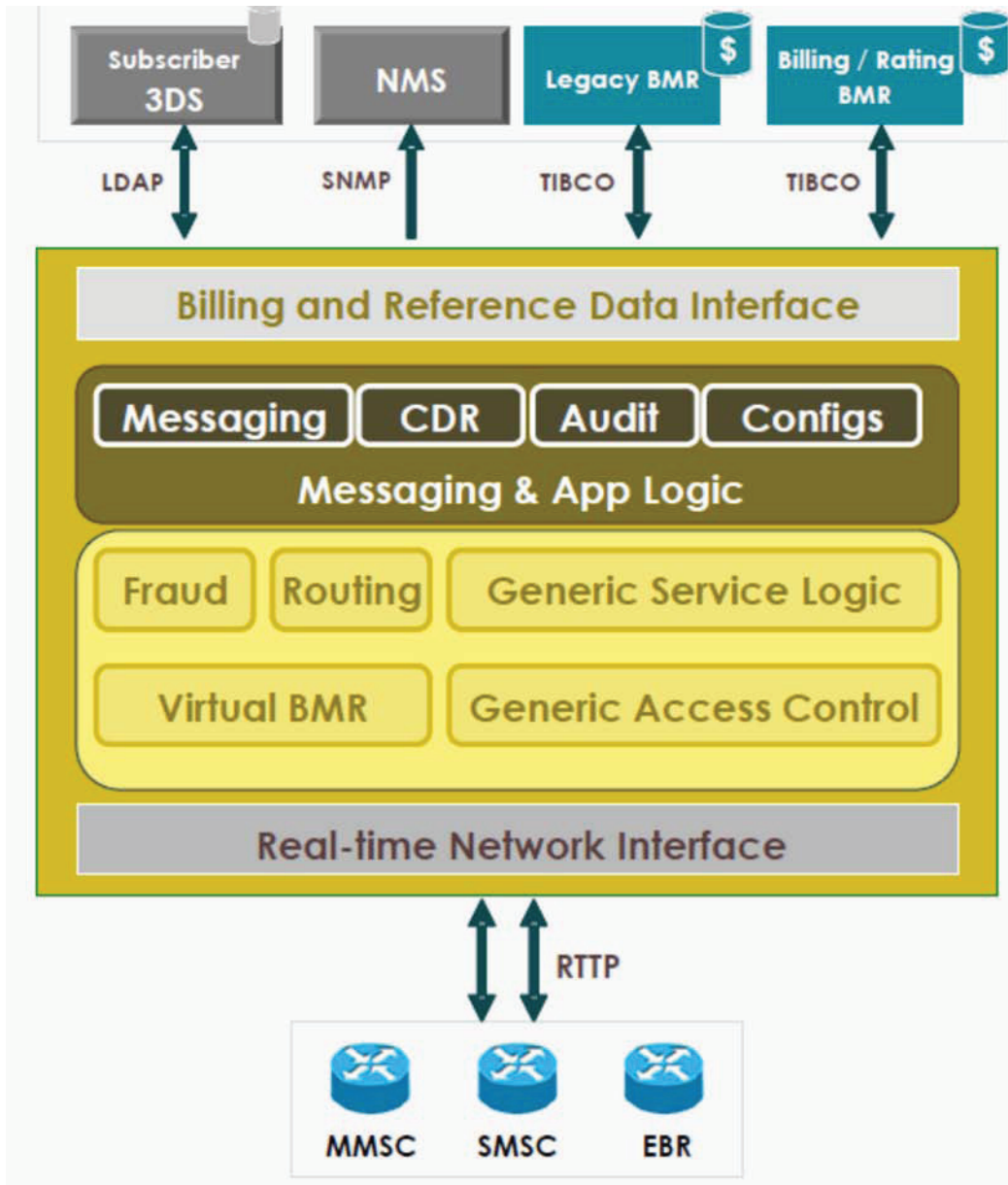
With TIBCO's high-performance unified service control solution, 3 UK experiences latency results as follows:

- 95% of all requests/processed < 50 ms
- 99% of all requests/processed < 170 ms
- 99.9999% of all requests processed < 300 ms. The system's throughput has been demonstrated at 3,500 transactions per second with the capacity to scale even higher. System availability with the TIBCO solution is at five 9s (99.999%). Moreover, 3 UK's system architecture now features a high-performing software platform that directly and easily integrates billing with the core network.

TIBCO's technology executes transactions in real-time, caches key data to include confirmation of credit worthiness, and facilitates virtual billing and rating to ensure accurate revenue capture and real-time prepaid service billing. Additional benefits derived from implementing TIBCO's solution include:

- An improved customer experience
- Reduction in revenue leakage
- Improved time-to-market for new service offerings
- Easier implementation of future rating and billing integration
- Improved performance and stability due to the replacement of older, problematic systems
- Opportunity for increased revenue

The highly beneficial relationship between 3 UK and TIBCO continues as 3 UK announced advances to the next stage of its deployment of TIBCO technology with additional deployment of the TIBCO Policy Orchestration™ product suite. Having successfully completed technology acceptance testing with TIBCO, 3 UK will be following on with user acceptance testing and full roll-out to follow shortly after.



TIBCO Solution for 3 UK



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**Global Headquarters**  
3303 Hillview Avenue  
Palo Alto, CA 94304

**Tel:** +1 650-846-1000  
+1 800-420-8450  
**Fax:** +1 650-846-1005