

EVOLVING
SYSTEMS



Tertio™

creating and activating services intelligently





These are daunting, but exciting times for mobile operators

Markets are at or near saturation, and price pressure on current voice and messaging services is enormous – but new data and content services offer the prospect of fresh revenue streams.

The rollout of 3G networks has been problematic, and severely delayed – but a broad spectrum of new technologies allows compelling services to be delivered anyway, over existing networks.

Competition is fiercer than ever, with more and more new providers entering the market – but with the right systems, it is possible to differentiate, gain an edge, and win market share.

The challenges of the market

Cost management, competition and quality of service are channelling operators' focus onto the service lifecycle. Of the IT systems that support the lifecycle, provisioning is the system that matters when it comes to service creation and fulfilment.



Evolving Systems Limited

A leading provider of activation, mediation and assurance and numbering solutions is working closely with mobile operators to help them turn their service ideas into action quickly and cost effectively.

Evolving Systems' Tertio

Evolving Systems' **Tertio**[™] service provisioning solution is unquestionably the leading product in its market today. It is used by companies in the T-Mobile, 3 and Vodafone groups as well as other leading international operators. Continuous development of the system alongside Evolving Systems' blue-chip customers has resulted in a unique approach to service provisioning that delivers real results with a fast return on investment.



The Service Challenges

Mobile operators face some specific challenges in today's tough market environment:

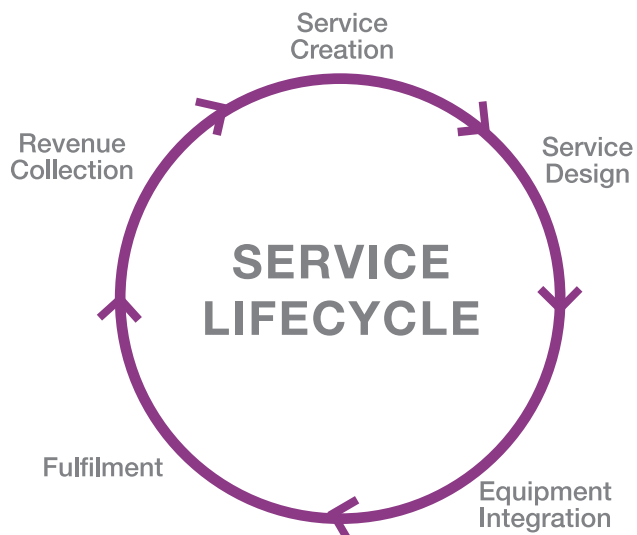
- **Cost management.** The operating costs for the many complex systems that support mobile networks and services easily exceeds their purchase price. Reducing those costs is vital – not just the day-to-day maintenance costs, but also the cost of making changes to the systems when new services and network technology are introduced.
- **Competitive edge.** The mobile market is highly competitive. To gain and maintain an advantage means being able to address the most profitable segments in a highly sophisticated market. Reaction speed is key to meeting emerging customer demands and countering competitors' moves.
- **Quality of service.** With a greater choice of service providers, customers will not tolerate sub-standard levels of service. Maintaining satisfaction and reducing customer churn means improving the quality of service delivered, and offering 'online service' to satisfy customers' demands for instant fulfilment.

These challenges are all about services, so to meet the challenges operators must look at the service lifecycle as a whole.

The Service Lifecycle

The Service Lifecycle is the series of stages each service goes through from initial conception to fulfilment and revenue collection, to modification or withdrawal. It has typically been long and involved many people, but operators cannot afford for that to continue. Their challenge is to tune the lifecycle for maximum efficiency to respond to or drive customer demand while still controlling operational costs.

Improving the service lifecycle means taking a hard look at the IT systems that support it. Much of the lifecycle inefficiency is caused by the way these systems - particularly Customer Relationship Management (CRM), Provisioning and Billing - support it today.



Improving Lifecycle Efficiency

When a new service is created, the CRM system needs to know what the service will deliver to the customer, and what customer information is needed to set the service up.

When a customer requests the service, the CRM system captures the appropriate information and passes a service order to the provisioning system.

It is the provisioning system that switches on the service in the network. The detailed process for switching on the new service needs to be defined in the provisioning system. If any new network or data centre equipment is required, it must be integrated with the provisioning system.

Every new service also has to be set up in the billing system, so the operator can bill for usage and make sure revenue from the new service is maximised.

The biggest problem for many mobile operators today is that each stage in the service lifecycle involves changes to more than one system.

Typically, the rules that define how a service is 'provisioned' are spread across the CRM and provisioning systems – so defining those rules or integrating new network elements means changing both systems. To add to the complexity, many IT architectures have evolved with CRM and billing being performed by the same system.

Research with Evolving Systems' customers has revealed that the service lifecycle can be made to run much more efficiently if each of the three key systems deals only with the function for which it is designed.

In the longer term, achieving the ideal solution may mean changing all the systems involved as well as streamlining business processes. While changing the billing and CRM systems can be lengthy and complex processes, significant benefit can be achieved quickly by addressing the provisioning process first.



Evolving Systems' Tertio Solution

Evolving Systems has many years experience helping operators to turn their ideas into real services. We have listened to our customers concerns about the service lifecycle efficiency, and worked with them to develop a product that truly delivers real results.

Our market leading Tertio solution is unique in improving service lifecycle efficiency because it addresses more of the lifecycle than other provisioning systems.

Tertio takes care of all the detailed design of new services and the network capabilities they use as well as network equipment integration. It means that all the rules defining how services are provisioned are held in one place – Tertio – rather than being spread between CRM and provisioning. This approach frees the CRM system to focus on the business-level logic it is designed for rather than holding details of low-level network element capabilities.

For this approach to succeed the provisioning system needs to excel in:

Clearly defining new services – an effective CRM/provisioning interface depends on clear definition of services and operators need the ability to add or change service definitions quickly.

Introducing new network equipment – operators need to introduce new network elements, and to quickly make use of the capabilities they provide.

Scale and convergence – millions of subscribers need to be supported across diverse technologies.

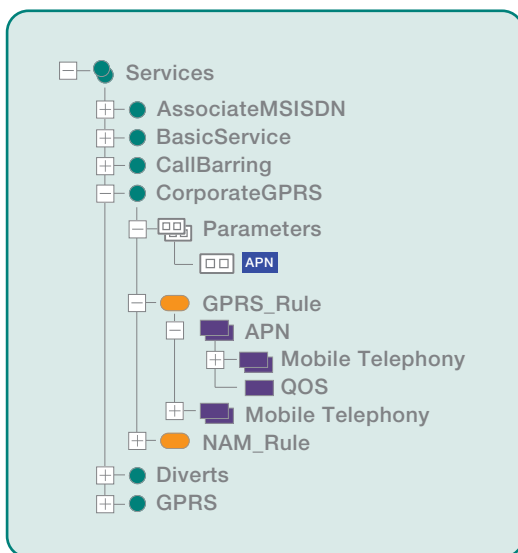
Trouble-free provisioning – operators need error-free provisioning of complex services.



Clearly Defining New Services

Evolving Systems' approach to provisioning is to define a clear interface between CRM and provisioning, where services can be added and changed quickly. Tertio deals with the technical detail of the services while the CRM system just deals with how the services are sold to customers.

At the interface with the CRM system, Tertio has a graphical design tool to define services with parameters that make sense in the CRM environment. For example, a corporate GPRS service with a named APN and a certain quality of service.



This same tool is used for the detailed technical design of the service. A service model is built, defining the network element features that each service uses.

When Tertio receives a request to provision a service (a service order), it uses the service model to break down the service into the features that need to be set on network elements, and the optimal changes to make.

The graphical service model makes it easy and quick to build new services from network features and add those services to the interface presented to the CRM system.

Introducing New Network Equipment

Tertio makes using new network features easy:

- Its modular approach to integration with the network reduces the cost and risks of adding new network elements.
- It has a further graphical tool for defining, as a structured sequence of tasks, the detailed logic required to manage network features.

It is this detailed logic that routes the changes to the right network elements. Tertio has in-built intelligence to handle responses from the network elements, act on them if required, and deal with any errors or rollback requirements.

The graphical tool makes it easy to see how the logic works and easy to make changes. Its structured nature means that once a specific task has been defined, it is easy to re-use it wherever a service requires the same action.



Scale and Convergence

Tertio meets the demands of provisioning new services for millions of customers on any network technology.

New services require new network elements: GPRS-enabled HLRs, 3G equipment, AAA servers, content systems – the list is endless, and any new service may use several of these. Managing them all through Tertio means that the rules for provisioning a new service need only be changed in one system. Tertio supports new pieces of equipment simply by adding new modules to support new interfaces. A service defined in Tertio can use the features supported by any connected network element.

With networks supporting tens of millions of subscribers, and new services being introduced at a steady rate, the provisioning system needs to handle huge volumes of service orders securely and without error.

Tertio's throughput performance is unmatched – Evolving Systems' performance model and benchmarking show that a single Tertio system is capable of supporting the provisioning requirements of the largest 3G network operators.



Trouble-free Provisioning

Problems in the provisioning process are highly visible and significantly impact customer satisfaction. Tertio is a highly developed provisioning solution, and guarantees full transaction integrity. If errors do occur – due to incorrect data, or failures in other systems - then Tertio provides clear, easy-to-use tools to trace, diagnose and correct the problem before it becomes a customer-visible issue.

Tertio can even help with service failures after provisioning. Settings in the network can become corrupt but with Tertio, a single action can refresh all a customer's settings and rectify a service fault with a single call to customer services.



Tertio is an integrated solution comprising three components:

Tertio Service Composer – for clearly defining new services.

Tertio Activation Designer – for defining how network equipment features are activated.

Tertio Service Activation – for scale and convergence, and trouble-free provisioning.



The Tertio Advantage

Tertio empowers operators to address the key issues of cost management, achieving a competitive edge, and delivering a high quality of service.

- **Cost management.** Tertio's modular architecture and tools for each stage of the service provisioning process help operators minimise the cost and effort of introducing new services.
- **Competitive edge.** Using Tertio to gain efficiency in the provisioning process can reduce the critical path for new service introduction. This is essential in a highly competitive market, and allows the operator's business as a whole to become more reactive to market needs.
- **Quality of service.** Tertio builds intelligence into the provisioning process. If errors do occur, Tertio can handle them elegantly and it frequently manages to complete or partially complete a service order. The number of failed orders – and dissatisfied customers – is significantly reduced.

In doing all this, Tertio delivers quantifiable returns. We know its advantages are real because we've worked with our customers to model them in financial terms. Evolving Systems can share this model with potential new Tertio users to help them understand the real return on investment.

Contact Evolving Systems today to discuss how Tertio could make your service lifecycle more efficient.

www.evolving.com

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