eTOM and ITIL:

Should you be Bi-lingual as an IT Outsourcing Service Provider?

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Service Providers' Dilemma

Over the recent years, the sourcing of IT-enabled services has been facilitated tremendously by the rapid evolution and expansion of the converged data and network services provided by the global telecommunications infrastructure. At the same time, ICT (Information, Communication & Technology) service providers have been confronted with formidable challenges because of the growing trend of Fortune 500 companies to delegate their IT-intensive business activities to external service providers.

The IT outsourcing service provider bears a great responsibility for a client's business success. Indeed, IT infrastructure is the heart of every business. The effectiveness of the IT is the effectiveness of the business. Therefore, the best known best practice of IT service management--ITIL (IT Infrastructure Library)--often becomes one of the major acceptance criteria when companies hand over their business-critical IT infrastructure to their outsourcing service providers.

IT Infrastructure Library (ITIL) was developed by the Central Computer and Telecommunications Agency of the British government and adopted by many companies as their internal IT best practice. However, for many of the ICT service providers, especially in the Telecom industry, eTOM² (enhanced Telecom Operations Map) is more widely applied and deployed for end-to-end service delivery and support. This paper provides a high-level overview of the similarities and the differences between ITIL and eTOM and how service providers can leverage the strength of both to deliver high-quality services. With this paper, we hope to establish the basis for further discussions on future issues concerning eTOM/ITIL implementation strategies, such as metamodel implementation for ITIL CMDB (Configuration Management Database), Ontology/Business Semantic based process discovery, and how to apply OMG's Model Driven Architecture (MDA)3 specifications to accomplish these tasks.

Similarities and Differences

eTOM is part of the NGOSS⁴ program from the TeleManagement Forum. eTOM is a business process framework to guide the development and management of key processes within a telecommunications service provider. It provides this guidance by offering a catalogue of industrystandard names and descriptions, with scope at multiple hierarchical levels. eTOM started back in 1995, known then as the TOM. Based on traditional network management standards, TOM added the perspective of business process. TOM very much focused on just the operational process needs. Since starting in 1999, eTOM has gradually added strategic, marketing, and product lifecycle planning and Enterprise process elements. One of eTOM's objectives is to aid the end-to-end automation of information and communications services for business and operations processes by using the holistic eTOM process framework for its entire value chain. including, for example, the service providers, customers, the software/hardware vendors, and

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¹ ITIL® is a registered trademark of OGC – the Office of Government Commerce. http://www.itsmf.com/

² eTOM® is a registered trade mark of the TeleManagement Forum (http://www.tmforum.org) ³ MDA – Object Management Group Model Driven Architecture, http://www.omg.org/mda/

⁴ NGOSS - New Generation Operations Systems and Software, http://www.tmforum.org/browse.asp?catID=1911

system integrators. eTOM has been adopted as ITU-T International Recommendation--known, in 2004, as M.3050.

ITIL began in 1980's as a UK initiative to create standard IT processes within its government departments, and has gradually evolved as the most widely accepted approach to IT infrastructure management. It consists of a set of best practices to enable the delivery of IT services that are reliable, consistent, and of the highest quality. These best practices guidelines and architectures ensure that IT processes are closely aligned to business processes and that IT delivers the correct and appropriate business solutions.

While both eTOM and ITIL are process frameworks, a high-level comparison of their differences can be summarized as followings:

| | еТОМ | ITIL |
|------------|--|---|
| Context | eTOM is a <u>prescriptive catalogue</u> of Process Element categories and a total Enterprise process framework for the ICT industry. | ITIL is a set of non-prescriptive guidelines for IT/ICT_Service Management. |
| Objectives | Provides a business process blueprint for service providers to streamline their end-to-end processes. Enables effective communication and common vocabularies within the Enterprise as well as with customers and suppliers | Aligns IT services with the current and future needs of the business and its customers Improves the quality of the IT services delivered Reduces the long-term cost of service provision |
| Scope | The eTOM provides a top-down hierarchical view of business processes across the whole enterprise and does not itself address how these processes are supported by automated or human action (this is, however, addressed in the wider NGOSS program of the TMF). It focuses on identifying the commonality of enterprise processes required among similar services, such as telephony, data, internet, mobiles, etc., for delivering high-quality end-to-end service management. eTOM focuses on service delivery to external customers. | The ITIL processes represent flows in a number of key operational areas, with a strong orientation towards how these processes will map onto IT support environments. It is primarily non-prescriptive, offers advice/guidance on the implementation and continued delivery of Service Management, including planning common processes, roles and activities with appropriate reference to each other and how the communication lines should exist between them. ITIL is primarily focusing on serving internal IT customers. |
| Adoption | eTOM has been adopted as ITU International Standards for the Telecom Sector, and primarily used by Service Providers in the ICT industry. An <i>eTOM</i> in Use matrix is available from the TMF: http://www.tmforum.org/browse.asp?catlD=1657 | ITIL is a set of best practices that is used by 10,000+ companies worldwide and continues to be advanced by itSMF local chapters: http://www.itsmf.com/ |

| Implementation | eTOM is a framework; therefore, the implementation will be different from company to company. | ITIL is a framework; therefore, the implementation will be different from company to company. |
|----------------|---|---|
| | The implementation of eTOM is supported by other TMF/NGOSS specifications, including the Shared Information/Data Model (SID), NGOSS Lifecycle & Methodology, and other related specifications. | Until recently, ITIL did not provide guidelines on the implementation order or means to assess the maturity of the service organization. In a new version of the booklets, more attention is being paid to implementation guidelines. |
| Compliance | eTOM compliance is achieved through the TMF/NGOSS Compliance Program; its certification is on tools not on organizations or processes. NGOSS compliance program encompass the conformance tests of other NGOSS specifications that further define the business objects and operations framework required for effective eTOM implementation. | ITIL is not a standard, nor is it a set of regulations, and, therefore, neither tools, processes, or people can be deemed "ITIL compliant." Processes and organizations can be assessed against ISO/BS 15000, the IT Service Management standard based on ITIL. However, neither tools nor individuals can be certified against BS 15000. |

The Development of eTOM/ITIL Interpreter's Guide

Despite the differences and complementary nature of the eTOM and ITIL specifications, there are still large overlaps of process fragments and terminology differences between the two.

As part of *eTOM* solution suite 4.1°, TMF produced an eTOM/ITIL Application Note titled <u>Using</u> <u>eTOM to model the ITIL Processes</u>. Quoting from this application note, there are three key areas in which ITIL may be applied within an ICT Service Provider's environment:

As products that are sold to customers increasingly include IT type offerings (LAN services, Web Hosting, etc), the internal processes that are needed to enable and support these IT type offerings must be designed to be an integral part of the complete end-to-end processes. That is, the back-of-house engineering processes must be integrated with the customer-focused sales and customer management processes. This can be done by modeling ITIL processes using eTOM Process Elements.

Customers are outsourcing the delivery and support of their IT Services to Telcos, so Telcos are offering IT Service Management as a sellable service. Because the Telco is dealing with the Customer IT workforce, it must communicate using ITIL standards.

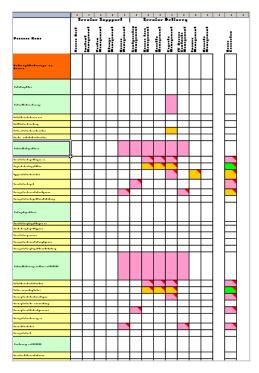
Telcos rely increasingly on effective IT Service Management of their own computer systems. Since ITIL represents a best practice in this area, it is natural that ITIL terminology will be used in this field. Those doing this specialist task within a Telco need to understand how to describe ITIL activities in eTOM terms.

The aim of this application note is to provide an overview and introduction to the ITIL Service Management Frameworks from a Telecommunications company perspective. It shows the eTOM process type each ITIL Service Management process belongs to and what eTOM process elements are needed in order to create ITIL-recommended processes.

⁵ eTOM solution suite 4.1 http://www.tmforum.org/browse.asp?catID=1649&linkID=29448

In mid-2004, a special work group was created under the TMF/eTOM team to focus on the analysis and to develop guidelines on how the eTOM and ITIL processes can be related, and providing information on mapping from the one view to the other, with the initial analysis focusing on the ITIL Incident Management area. The output from this work is published as one of the TMF Technical Reports, known as <u>An Interpreter's Guide for eTOM and ITIL Practitioners.</u> This document includes terminology comparisons between eTOM and ITIL, mapping between eTOM and ITIL processes, and the business benefits of using a combined eTOM and ITIL process approach. This team will continue on the process analysis and mapping on remaining ITIL process domains, such as Configuration Management, Availability Management, etc.

Example output of the gap analysis is similar to the diagram in Figure 1, where the first column represents a portion of the eTOM Level 3 processes and the top rows represent the ten ITIL business processes domains. From this diagram, one can easily observe the white space where ITIL processes are not covered but are generally required by the Service Providers if one is to deliver end-to-end service management and process automation.



Source: Greg Fidler, PracticalEA

Figure 1.

Practical Process Mapping Examples

Telecommunication service providers are increasingly being asked to show that they comply with best practice in ITIL for which, without implementing the ITIL processes parallel with existing processes, it is difficult to show compliance. However, it is possible, by analysis, to demonstrate how ITIL processes are being implemented within a service provider's current process framework. With further analysis, it is possible to improve on the flow to ensure that it is fully compliant with the required ITIL process.

The mapping of eTOM to ITIL has shown that the two frameworks are complementary, but any mapping is at best illustrative. In practice, mappings vary, depending on how and what processes have been implemented. This variance is due partly to the many-to-many relationships between the two frameworks, and partly because of the illustrative nature of the flows in the ITIL documentation. In reality, the ITIL processes and process flows are rarely implemented as per the

documentation. There will always be some variance, depending upon how a company is organized and what processes it wants to implement. This is the same for eTOM and produces a mapping where you will always have to answer, "It depends," when asked for any mapping solution.

The example in Figure 2 is a simplified eTOM Assurance Process for Problem Resolution (the yellow process elements). The process flow can be analyzed to identify the correlation with ITIL (highlighted in pink)—in this case the Incident Management Process. This correlation allows the service provider to demonstrate compliance to ITIL by illustrating how the ITIL process is implemented within the customer's process architecture. Further analysis can be done to identify where the flow is deficient when compared to ITIL. This allows the service provider to implement new processes so that compliance to ITIL can be achieved.

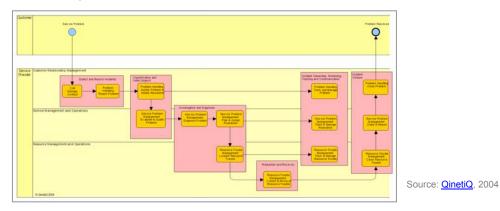
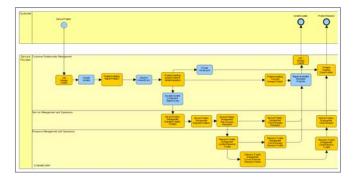


Figure 2

The diagram in Figure 3 illustrates how ITIL sub processes (highlighted in blue) can be used to change the flow to ensure that it is ITIL compliant. This hybrid process flow takes the best of both frameworks to provide a more complete process flow.



Source: QinetiQ, 2004

Figure 3

Summary

Base on the TM Forum eTOM/ITIL analysis work, we are convinced that the service providers should model all their operational process in a standard way; that can be done by modeling the processes using the Process Elements of the eTOM process framework, which provide the breadth of the process coverage required for the service providers across different types of services. ITIL can be used very effectively in conjunction with eTOM in that it will assist in creating a more complete Enterprise Business Process Framework which includes all the functional elements needed for IT support processes.

In June 2004, Jim Clinch, ITIL Service Manager from The Office of Government Commerce, UK, published a paper, *The Future of ITIL*, in which he stated that the following three factors will radically alter the content of ITIL during the next 12 months and dramatically change the mode in which that content is presented. These three factors are:

The UK government has withdrawn funding of ITIL support; effective "ownership" of ITIL content has passed into the hands of the ITSMF.

A large number of mostly European user companies are pushing the ITSMF to "formalize" ITIL. In its current incarnation, ITIL is little more than a set of loose and often inconsistent verbal definitions. The formalizing camp is pushing to bring the ITIL process descriptions into line with pi calculus-based efforts at defining business processes.

Discussions between the ITIL and TeleManagement Forum NGOSS communities are driving toward a convergence of ITIL and eTOM.

I will end this paper with a quote from the META Group's *June 29,2004 META Group Client Advisory Report:*

Organizations seeking to treat ITIL as a rigorous standard should delay the transformation effort for another year - by which point ITIL will be more consistent, formal, and better fitted to supporting operational management technologies.

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