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The TeleManagement Forum is an industry consortium of telecommunications companies. They held their last meeting in Nice, France, in May, and will be holding their next meeting in Dallas, Texas on November 10-13, 2003. The Forum provides a place for those involved in the telecom industry to get together to share information about business and IT developments in telecommunications. It also provides an opportunity for those involved in the development of the TeleManagement Forum's NGOSS effort to meet and coordinate their efforts.

The TeleManagement Forum's New Generation Operations Systems and Software (NGOSS) effort aims to develop an architectural framework for organizing, integrating and implementing telecom systems. The NGOSS effort is driven by an analysis of telecom business processes (eTOM) which was initially begun in 1995 and has accelerated since 2000. The current overview of the effort is illustrated in Figure 1.

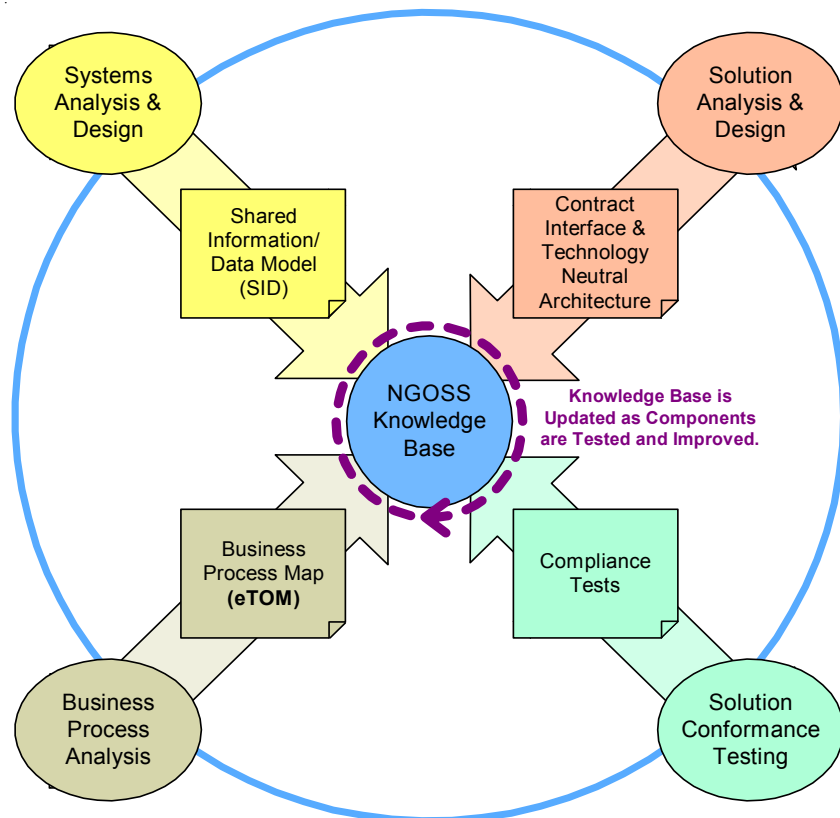


Figure 1. An overview of the TeleManagement Forum's NGOSS Framework.

Figure 1 illustrates four perspectives or sources of the growing NGOSS knowledge base of standards, tools and best practices..

eTOM. Starting at the bottom left, business process analysis has resulted in a business process map of high-level telecom processes. The resulting business process framework is called the enhanced Telecom Operations Map (eTOM). eTOM provides a graphical



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overview of the business processes used by all telecoms, and a common vocabulary that all telecoms can use. In addition, process flowplans are provided for a growing number of key processes.

The eTOM framework defines processes at three levels. At the top level there are four major business processes: (1) a Fulfillment Process, (2) an Assurance Process, (3) a Billing Process, and (4) an Operations Support and Readiness Core Process. Each of these is divided into sub-processes. Thus, the Fulfillment Process includes subprocesses like SP Busing, S/P Purchase Order Management, S/P Interface Management, Resource Provisioning and Allocation to Service Instance, Service Configuration and Activation, and Customer Interface Management Interface. These sub-processes, themselves, are then divided into activities.

The major business processes cut across functional silos, but the sub-processes tend to be assigned to specific functions, or to multiple functions. The eTOM model identifies four functional units: (1) Management Supplier/Partner Relationship, (2) Resource Management and Operations (IT), (3) Service Management and Operations, and (4) Market, Product, and Customer Relationship Management.

In essence, a telecom sells time on its network to customers. Since the time is sold and monitored by means of computers that track phone access, Service and Resource are important functions. Since almost all long distance phone calls cross multiple networks, arrangements with other telecom companies – partners – are very important. We suspect that actual phone companies might sub-divide their departments somewhat differently; placing marketing and service in separate departments, but remember that most phone sales and service requests come in through a common call center, so this high-level grouping works reasonably well. (See Figure 2.) (Note that in Figure 2 the white horizontal bars are departments or functional units, while the processes are shown as vertical columns.)

SID. Continuing clockwise, we come to the Shared Information/Data Model (SID). SID provides a common language for software providers and integrators seeking to describe management information and elements or entities to be stored in databases.

Interfaces and an Architecture. At the top right of the figure we are concerned with defining how software components can be constructed to implement business processes. An overall, platform-neutral architecture and an interface (API) model define the principles that allow developers to create OSS components that can be used in distributed telecom environments.

Compliance Tests. Finally, a suite of tests assures that products conform to eTOM, SID and NGOSS architectural and interface specifications. The tests allow vendors to achieve certification for complying with one or multiple NGOSS standards.

In addition to these four key elements that make up the NGOSS framework and knowledge base, there are supporting tools. A series of documented, demonstration projects to show how the framework can be applied, and a NGOSS development methodology are being developed.

The demonstration, or **Catalyst** projects are multi-vendor collaborative efforts that illustrate and test the use of the NGOSS framework in practical implementations.



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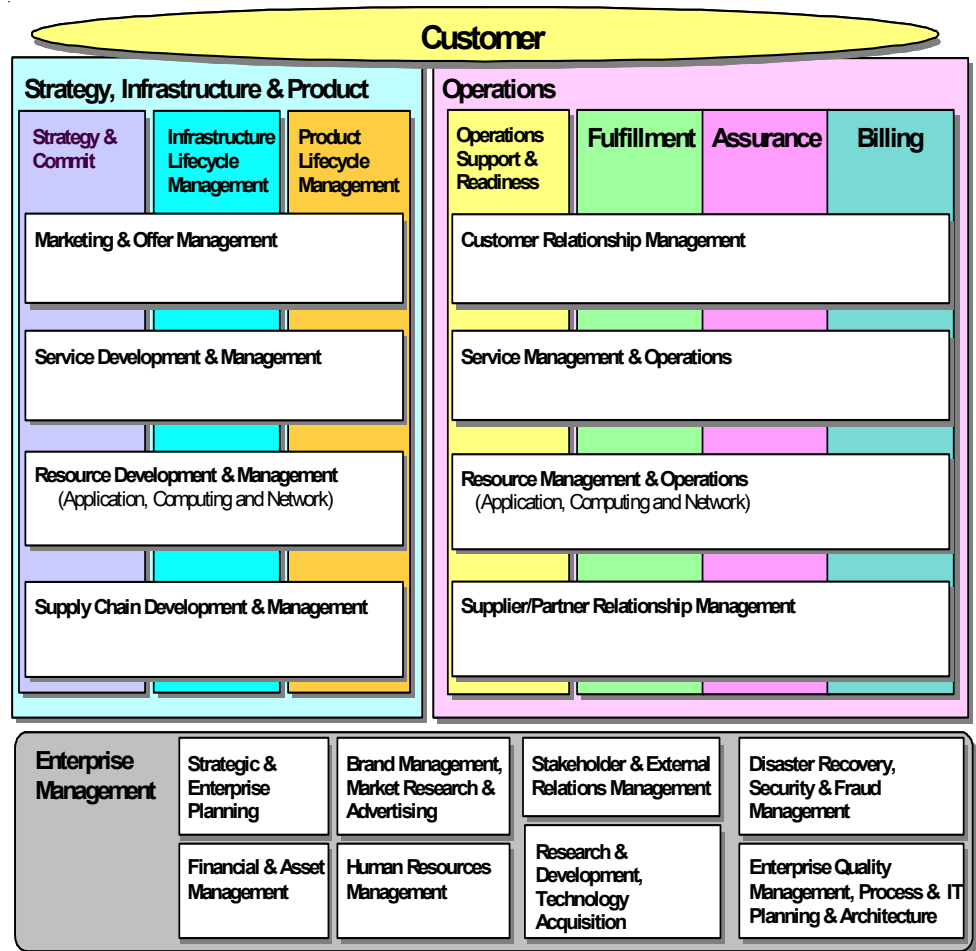


Figure 2. Overview of the TeleManagement Forum's eTOM Framework showing Level 1 processes.

The **NGOSS methodology** currently being developed by a committee will combine the strengths of the Zachman Framework, RM-ODP, USDP and the OMG's Model Driven Architecture (MDA). In essence, the methodology describes an approach for analyzing, designing and generating component-based applications that are vertically aligned. Figure 3 suggests how the NGOSS methodology relates to Zachman and MDA.

NGOSS Release 3.0 with the latest versions of eTOM (ver. 3, GB921), SIM (ver.2 GB914), SID (ver. 2 GB922), the complete Technology Neutral Architecture (TMF053) and the Testing Suite (TMF050) was approved at the spring meeting of the TeleManagement Forum in May of 2002.

NGOSS is a work in progress and teams continue to work on all aspects of the framework. This June, for example, eTOM 3.5, with further process decompositions, was released, and the methodology and Catalyst demonstration projects are ongoing efforts.



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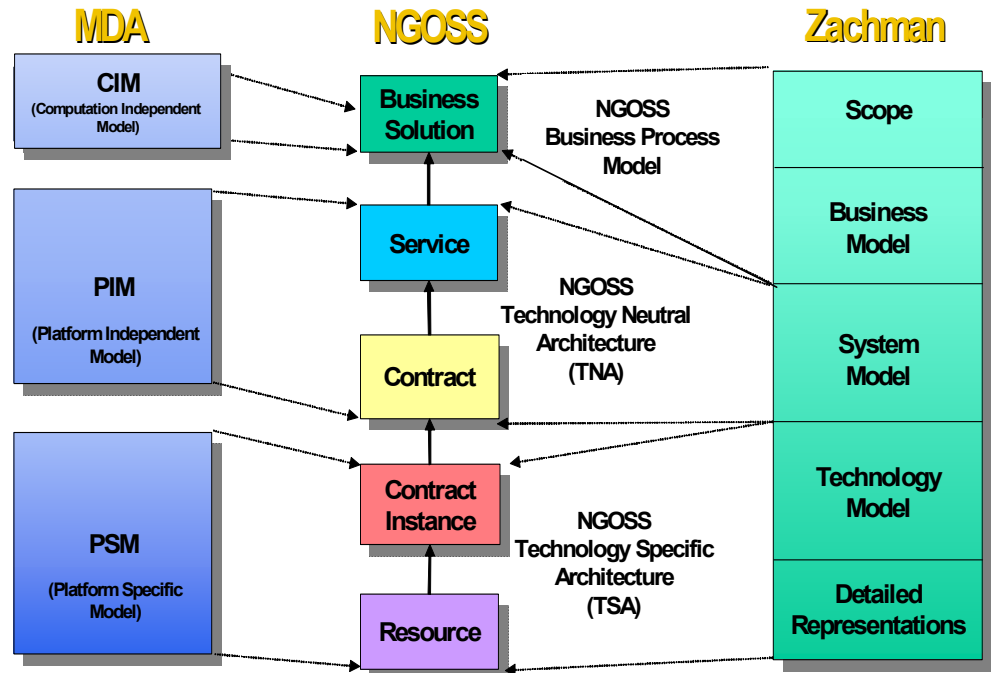


Figure 3. The NGOSS methodology, currently in development, showing its relationships to the OMG's MDA and the Zachman Framework. [1]

We believe that companies will increasingly need to develop high-level overviews of their processes in order to organize and coordinate their ongoing efforts and in order to prepare to change. We refer to a company's high-level overview as a business process architecture. Clearly, any telecom that participates in the TeleManagement Forum gets a great start. They can begin with the business process architecture that the Forum has developed and then tailor it to their specific needs. Moreover, any telecom adopting the eTOM framework will also get all of the other aspects of NGOSS, including its database and components standards, as well as its test suites.

The International Telecommunication Union Telecommunication Standardization Sector (ITU-T) concluded an agreement, in August, with the TM Forum, which allows the ITU-T to adopt TM Forum standards as its own. Thus, the NGOSS framework seems set to enjoy even wider use within the Telecom industry.

Both Casewise and Proforma offer templates that make it easier for telecoms to model their processes with the eTOM framework.

Notes

[1] This figure is derived from a presentation by Joel J. Fleck, II, Chief Architect of Hewlett Packard and a member of the NGOSS methodology task force.

We have previously published a BPTrends Advisor on eTOM. See www.bptrends.com/publications/advisors: *The TeleManagement Forum's eTOM Framework*, May 2003.

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For more information on NGOSS or eTOM, visit the TeleManagement Forum site: www.telemanagementforum.com and look under Technical Programs.

For information on TeleManagement World conference in November in Dallas, Texas, check: www.telemanagementworld.com

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