F l o w T h r u

Co-operative Secure Management of Multi Administrative and Technology Domain Network and Service Management Systems : AC335

TeleManagement Forum Business Process to TINA-C Business Role Mapping

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ABSTRACT

TINA defines a Business Model containing Business Roles and Reference Points between them. The TeleManagement Forum has produced a Telecom Operations Map defining business processes for a service provider. This document presents a mapping between TINA business roles and TeleManagement Forum business processes for comment.

Keywords :

TINA Business Model, Tele Management Forum Business Process Model, Reference Points, Business Processes Reengineering

1 INTRODUCTION

This discussion document has been prepared by the ACTS project FlowThru. It aims to present a translation between the different business architecture concepts defined by TINA-C and the TeleMangement (TM) Forum. This translation is presented as a mapping between the business roles defined in TINA's business model and the business processes presented in the business model from the TM Forum. The aim of distributing this document is primarily to make people within TINA-C working groups aware of the TM Forum model and its possible mapping to the TINA one, and to elicit feedback from TINA-C members on the accuracy or otherwise of this mapping together with any other comments they might have.

Please send any comments to David Lewis, FlowThru Technical co-ordinator, email: D.Lewis@cs.ucl.ac.uk. More information on the FlowThru project can be obtained from:

http://www.cs.ucl.ac.uk/research/flowthru

Further information on the TM Forum Telecoms Operations Map can be found at:

http://www.tmf.org/pages/publications/books.html#telops

2 TELEMANAGEMENT FORUM BUSINESS PROCESS MODEL

The TM Forum business model is described in the TMF Telecoms Operations Map. The primary aim of this model is to provide a reference against which the definition of standardised interface between service providers and customer, suppliers or other service providers can be conducted within the Tm Forum. It was based on surveys of existing providers, and framed so as to enable discussion of industrial agreements without having to expose the possibly sensitive internal structures of any particular TM Forum member. A simplified view of the model is presented in Figure 1. The model is partitioned into processes that interact directly with the customer, to internal service development and maintenance and to the management of the provider's networks and systems. The processes are also grouped vertically into major service management areas, i.e. the fulfilment/delivery of the service, the assurance/maintenance of the service and the billing/accounting for the service. Individual processes are defined in terms of activities within the process and in terms of input triggers to and output triggers from the process.

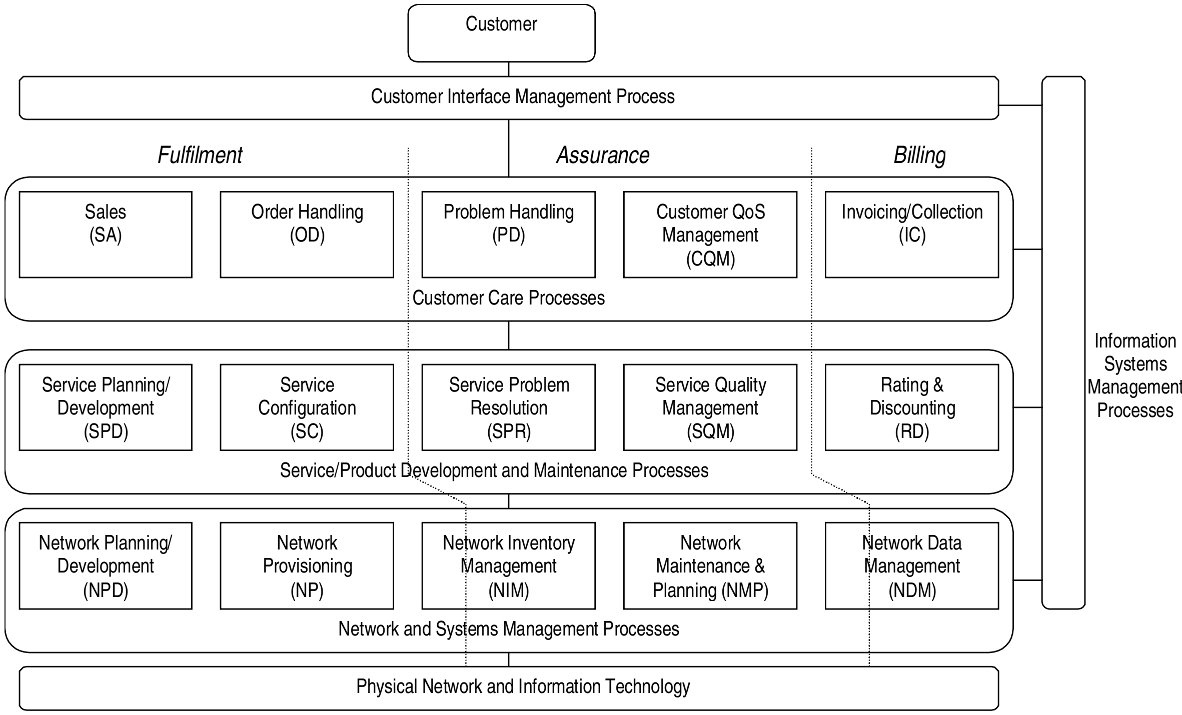

Figure 1: TMF Telecommunications Operations Map

3 TINA BUSINESS MODEL AND REFERENCE POINTS

The TINA approach to business modelling is to identify a number of business roles and define the reference points that exist between them. The TINA business model defines the following business roles:

- The Consumer role, which takes advantage of services provided by a TINA system but without the intention of providing TINA services to other business roles.
- The Broker role, which enables other business roles to locate service providers.
- The Retailer role, which is concerned with providing services to the Consumer role.
- The Third Party Provider role, which is concerned with providing services to Retailers or other Third Party Providers, but not directly to Consumers.
- The Connectivity Provider, which owns a network and provides connectivity services over it to other business roles.

A set of business relationships (see Figure 2) is specified between these business roles. TINA Reference Points are defined with respect to the business relationships they support. All the non-Consumer roles have self referential business relationship supporting the federation of and business co-operation between these roles.

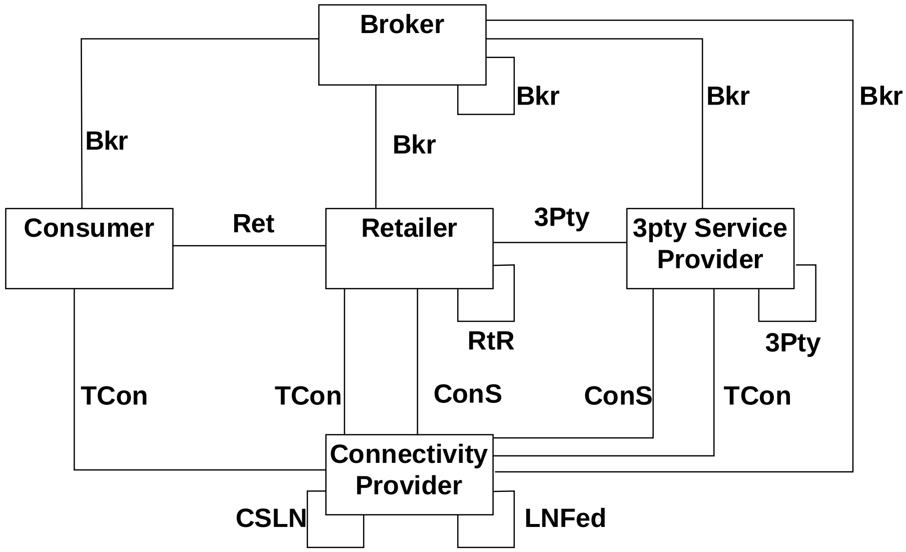

Figure 2: TINA Business Roles and Relationships

In a business situation where a TINA conformant system is required to support inter-domain interactions, the different business administrative domains involved may be characterised by the TINA business roles they play with respect to each other. This determines the TINA business relationships they have with respect to each other. The identification of business relationships then allows inter-domain conformance specifications to be defined by the amalgamation of the reference points related to the business relationships concerned, plus any service specific interactions required. These reference points are defined in segments, with common segments used to cover the core parts of TINA system functionality. The primary segmentation is between access functionality and usage functionality. The access segment is concerned with authentication and authorisation of users, the selection of services and the setting up the context for the use and management of the service. The usage segment is subdivided into primary usage segments covering the functionality that is the main objective of the service, and ancillary usage segments that address administrative and management functionality. This segmentation of reference point definitions enables any inter-domain reference point to be defined with the minimum set of functionality needed for the business relationships being analysed.

4 MAPPING TMF BUSINESS PROCESSES TO TINA BUSINESS ROLES

Before examining such a mapping, the core differences between the two models must be appreciated. Firstly, the TM Forum Operations Map defines general business processes in existing telecoms businesses. These may be human based processes or automated ones. Part of the intention of the Operations Map is to identify and prioritise which processes TM Forum members wish to automate, and therefore which inter-process interactions would benefit from industry agreements. The TINA model restricts itself only to reference points that will yield automated interfaces. In addition, the TM Forum Operations Map is concerned only with service and network management processes, while the TINA reference points also address of service and network control. TINA also assumes its Distributed Processing Environment (essentially CORBA) will be used to implement reference point interactions, while the TM Forum’s Operations Map makes no assumptions about implementation technology (this is addressed in the TM Forum’s Technoology Integration Map).

Functionally, TINA management is aimed specifically at managing TINA services (multimedia, multiparty, multiway, mobile) and network resources (connection oriented, broadband), while the TM Forum model is less specifically targeted, but is mostly aimed at the management of more contemporary services and networks, i.e. POTS, Frame Rely, SDH etc. TINA also specifically covers information services, while these have not yet influenced the TM Forum Operations Map to a large extent. Finally, the TM Forum Operation Map prioritises issues of process interaction and information flow between processes, while the TINA BM and Reference Points are focused on the development of detailed reference point specifications, based on other ODP-based TINA specifications, with little direct attention placed on business process modelling.

The basic approach to merging the TM Forum Operations Map to the TINA business model and reference points is to identify which TM Forum processes operate in which TINA business roles. Note that some TM Forum processes may be present in more than one TINA business role. The mapping of these TM Forum Business Processes onto TINA Business Roles is given in the Figure 3.

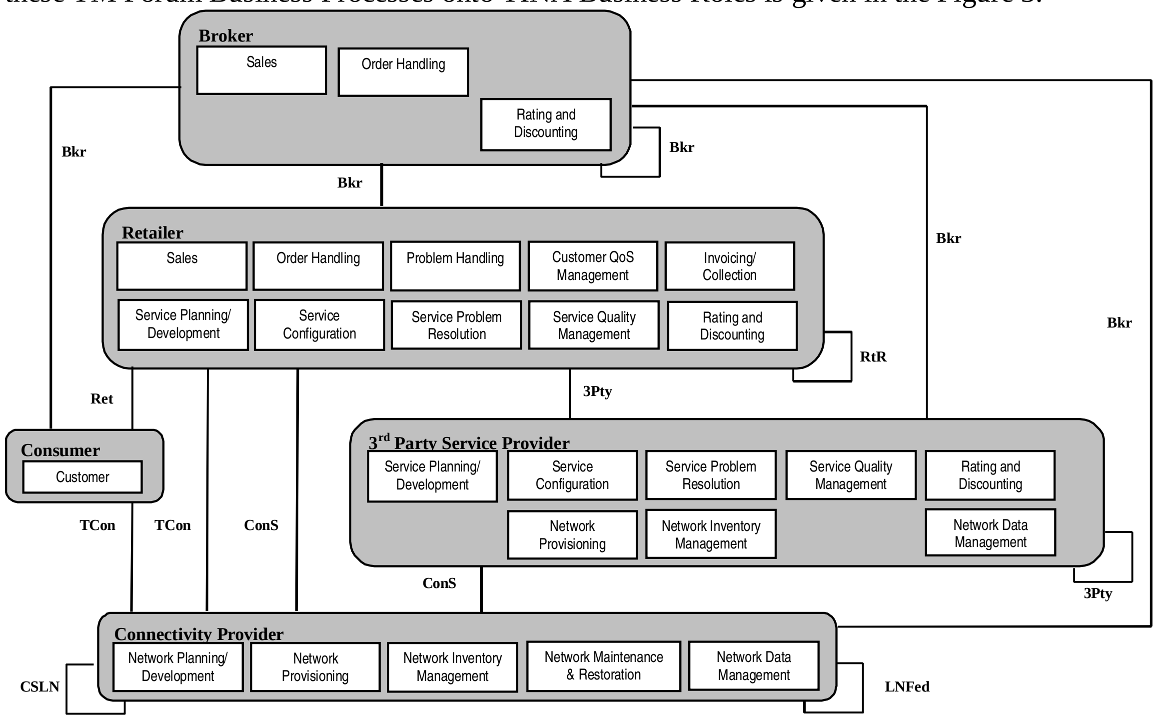

Figure 3: Mapping of TMF Business Processes onto TINA Business Roles

The principal assumptions behind this mapping are as follows:

- The TINA Retailer role is the one that embodies the TM Forum Customer Care Processes. If an organisation operating in the Retailer role has to communicate with another organisation playing the Connectivity Provider role or the 3pty Service Provider role, then these other organisations will also have to also play the Retailer role so that any Customer Care process-related interactions are performed via the RtR business relationship.
- The TINA Retailer is not concerned with any Network and System Management Processes.
- The Connectivity Provider role is only concerned with Network and System Management Processes.
- The 3pty Service Provider is only concerned with Network and System Management Processes related to the provision of service content, i.e. Network Provisioning, Network Inventory Management and Network Data Management..
- The Broker will be affected by Sales, Order Handling and Rating and Discounting processes in other business roles, so these process are mapped onto this role to indicate this. This is not intended to cover the application of these processes to the Broker's own services (i.e. broker services), which should be addressed by an organisation in the Broker role also taking on the Retailer role.

These assumptions need examining to ensure that the resulting mapping is in line with what was intended in the TINA business model.

The fact that the TM Forum business processes are based on in depth analysis of industry needs provides a strong argument that TINA roles should encompass these processes and that the reference points should be extended to accommodate their interactions. The addition of these processes into the business roles may broaden or change the function of the roles from what was originally intended, thus also potentially requiring the definition of some existing reference points to be modified.