ORDER MANAGEMENT & ENTERPRISE PRODUCT CATALOGUE – SYTEL REPLY INTEGRATED SOLUTION

In the last decade, the Telco Market has proved to be one of the most innovative and growing market in Italy; due to this evolution the major industry operators have achieved substantial benefits, but this growth has also resulted in many challenges to be faced. One of the main problems is the break-up and fragmentation of the view featuring the product catalogue and its behavior. To respond to this particular issue, Sytel Reply has designed and developed a solution that provides a stand-alone and centralized Enterprise Product Catalogue (EPC); combined with an Order Management system, based on a Business Process Management engine, the Enterprise Product Catalogue enables to solve all the problems related to view fragmentation.

THE SCENARIO

In order to achieve growth and innovation the Telco Market must build new products and services in shorter times. An Enterprise Product Catalogue provides a convergent solution for the various Operator’s business lines, thus innovating the typical Telco system architecture which usually features a catalogue that resides in CRM and/or Billing systems.

The EPC is a stand-alone solution aimed at making the catalogue independent from Customer Management and Billing solutions, centralizing product information, enabling synchronization and alignment within BOSS systems (Business & Operating Support Systems).

The spread of catalogue information to other systems with secure, controlled and organized processes requires an innovative Order Management system which does not only carry out the technical alignment of multiple platforms with regard to a single order, but which also provides a view of the business flow linked to the product/service which is being deployed and which is therefore able to manage and monitor it.
In order to meet these requirements, Sytel Reply has developed a stand-alone, flexible and configurable EPC and an Order Management (OM) system based on a Business Process Management (BPM) engine; if used in a comprehensive integrated way, they provide an effective support to the Operator’s business and marketing strategies; multiple sets of different products and services can be combined in a simple way; moreover, the solution provides a single-access point and a unique view across a centralized repository.

THE SYTEL REPLY SOLUTION FOR ENTERPRISE PRODUCT CATALOGUE AND ORDER MANAGEMENT

THE ENTERPRISE PRODUCT CATALOGUE LOGIC. The catalogue features all the relations between products/services according to the parameters defined for the commercial offer (customer segmentation, offer type, order entry channel, etc.). When building the catalogue, the focus shall not be merely addressed to the technology used - which must anyway be extremely advanced - but above all to the structure as well as to the logics/rules it must support.

The Order Entry and Order Management systems provided by the Catalogue envisage a set of services which allow to define the Operator’s commercial offer according to the single customer’s requirements; they also allow the mapping of the offer according to specific technical products and billing products. Sytel Reply EPC features three different display modes: a commercial, a technical and a billing view.

The services offered by the catalogue are therefore split up according to the perspective selected:

- Commercial view
- Technical view
- Billing view.

The commercial view provides an insight of the commercial products linked to each other (composition, incompatibility, dependency, mandatority and marketability rules) with regard to offer type and customer segmentation. Therefore, commercial offers can be defined as “A set of commercial products a customer has subscribed or can subscribe for”. Commercial offers are grouped in offer types (Macro-Offers) which provide an overview of the services offered to the customer.

After having designed the macro-container of the offer, it is necessary to define all the subscribable products which can make up the offer; products are then subdivided in Basic and Additional Products and grouped according to common attributes. An important feature of the Commercial View is the subscribability of a product which is based on the customer type (Consumer or Business), date of sale, macro-offer and rules such as compatibility, eligibility and dependency. The logic applied to manage the subscribability is based on the subdivision of the offer into various levels; each level is associated with a set or a group of products which have two attributes: Mandatory or
Upgradable. The solution is described in the following scheme.

The Technical View is used for decoding the commercial product into a set of technical products and actions to be carried out.

The same applies for the Billing View in which the commercial product is associated with a set of actions to be performed within the billing system; as for the Technical View, also the Billing View is based on the relevant commercial product and on the action to be carried out.

**THE ARCHITECTURE OF THE ORDER MANAGEMENT SYSTEM.** With regard to the design and development of an Order Management framework, the selection of the technology and of the integrated products plays a very important role; in fact, performance and upgradability aspects of the system, both in terms of business processes and technology integration, are crucial for this kind of applications. When developing the Order Management System, Sytel Reply decided to use a Business Process Management product facilitating the configuration of processes related to order activation, deactivation and change and enabling an effective and real-time progress monitoring. The standard used is XPDL (XML Process Definition Language), a markup language designed for work process definition, standardized by WFMC (WorkFlow Management Coalition).
The figure shows the logical architecture of the Order Management system: as shown, the systems involved in Order Management are integrated through the Web Service including the Catalogue. The BPM engine interacts with the database containing the customer consistency and with the internal application logic. The technology used to build the framework bases on J2EE paradigm and Open Source tools have been consistently used.

**THE INTEGRATION ARCHITECTURE.** The integration of EPC with Order Management framework enables to build an innovative architecture where the commercial offer and the customer order management are the core of the application logic; as a consequence IT systems can support the Operators’ business growth and enhancement in a native and effective way.

Sytel Reply is the company of the Reply Group specialized in the Telco Market. Sytel Reply’s mission is to support telecommunications operators in the technology and application innovation by designing, deploying and managing systems addressed to the BSS and OSS areas.

Leveraging its expertise and competence, Sytel Reply deploys a team of professionals able to support customers in each phase of the project: system design, requirements analysis, software development and go-live.

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