Requirements Specification

Semantic Approach to Modeling a Consumer Electronics Enterprise

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Table of Contents

1. Introduction

This document is a Requirement Specification for Semantic Approach to Modeling a Consumer Electronics Enterprise. This is the initial draft for the requirement specification and it will be used for the extensions.

1.1 Purpose

The aim of this document is to provide detailed requirements specification of the project. Through this document, the workload needed for Modeling Enterprise Architecture will ease. To be specific, this document is going to describe required functionality, none functionality and detailed description of the Modeling workflows that should be implemented.

1.2 Project Scope

The aims of the project are:

1.2.1 Develop comprehensive enterprise architecture for:

- Organizational structure
- Functional structure
- Models of business processes
- Logistics
- Finance
- Different sell channels

1.2.2 Develop the ontology of the enterprise

1.3 Definitions

There are some roles which are used inside this document, so the aim of this section is to clarify these roles within this document.

- **Customer:** Our Customer is an Electronics company like Dell, Samsung, Apple, HTC, HP or similar.
- **Client:** clients are Enterprise architect Consultants.

2. Overall Description

2.1 Product Perspective

The idea behind the project is to comprehensively describe the architecture of a Consumer Electronics Enterprise, e.g. its functional structure, organizational structure, business processes, supply chains, logistics, money flows and information flows.

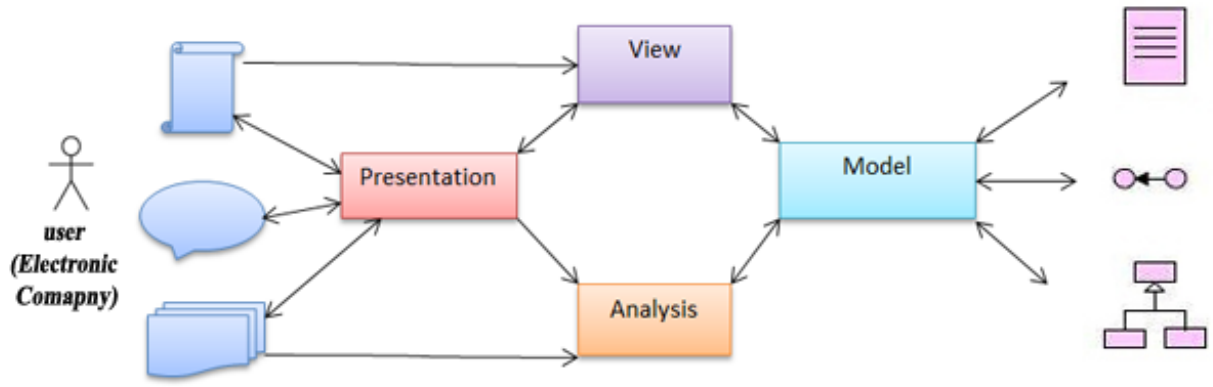

Figure-1: Scenario Specification

2.2 Modeling Tool & Graphical Notation

● **ARIS:** ARIS (Architecture of Integrated Information Systems) is an approach to enterprise modeling. It offers methods for analyzing processes and taking a holistic view of process design, management, work flow, and application processing. The ARIS approach not only provides a generic methodological framework but also a business process modeling tool.

● **Archimate:** Archimate is an open-standard enterprise architecture language based on the IEEE 1471 standard, providing a common language for describing the construction and operation of business processes, organizational structures, information flows, IT systems and technical infrastructure. It enables Enterprise Architects to clearly describe, analyze and visualize the relationships among business domains.

2.3 User Documentation

The project includes user documentation components (such as user manuals, online help and tutorials) that will be delivered to the clients.

3. General Requirement of Architecture

3.1 Comprehensive Architecture:

Effective enterprise architecture comprises a comprehensive view of the business, including its drivers, vision and strategy; the organization and services required to deliver this vision and strategy; and the information, systems and technology required for the effective delivery of these services.

3.2 Consistent Architecture:

Define consistent architectures for modeling Enterprise.

3.3 Unambiguous Architecture:

Enabling Enterprise Architects to describe analyses and visualize the relationships among business domains in an unambiguous way.

4. Physical Requirements

4.1 Modeling tools:

- ARIS
- Sparx Enterprise Architect

4.2 Graphical Notations:

- Archimate
- UML
- BPMN

5. Principle

principle	Rationale
Priority Prioritize satisfying business needs over all other considerations.	Architecture gives most benefit when closely aligned with business strategy and goals.
Agility Promote business agility and adaptability.	Empowers the business to adapt and progress in a changing business environment.
Accountability Ensure that all information assets have an identified business owner who is accountable to the University and track and record all actions and events that lead to access or changes in information.	Those with the most knowledge of the data are best placed to make rational and coherent decisions. It is imperative to track all changes and access in order to enforce non-repudiation of actions.
Dependability Ensure consistency and predictability using appropriate constraints and controls.	Consistency and predictability reduce risks, lower costs and help increase the value of information assets.
Integrity Prevent or detect and repair unwanted changes to information.	Data quality is a major factor in preserving and enhancing the business value of information assets.
Hiding Hide the internal details of services from consumers to avoid creating dependencies on internal structures and logic that may change. Handle errors and exceptions where they occur to prevent 'cascading errors syndrome".	Keeping the internal structures and logic of services private from consumers of the services frees them to use and combined services in the way that best suits the business of the University.
Reuse Maximize reuse by designing services that are useful to the largest possible number of consumers.	Reusing existing services and systems reduces the work required to implement new ones.
Simplify Reduce complexity for greater flexibility and lower cost.	Lowers costs through economies of scale and reduces overhead of managing complexity.
System Life Cycle Plan and manage application services throughout their entire life-cycle, including the “end of life” phase.	Applications and services should be actively managed throughout their life cycle to extract maximum benefit for lowest cost.

6. Functional Requirements

Components	Requirement	Description
Sales Management	Obtain Product Knowledge	Explain how the product works or why it's unique that the benefits to the customer are left out of the discussion.
	Sales Training	Selling product in limited amounts, in select localities, to test its response.
	Execute Sales Plan	This is the execution part of various sales management strategies which are used and it involves various modes of selling, which are coupled with marketing campaigns for the product sale.
	Feedback and Analysis	Review and feedback of the sales performance.
Customer Support	Multichannel Support	Includes phone, and Voicemail media to handle customer issues and complaints.
	Self-support Integration	Provides documentation, Help and FAQ sections addressing customer's problems.
	In Store Support	Service desk in all branches of company for technical support.
	Email Support	Handles customer's emails to provide support.
Localization	Document Creation and Management	Create the documents which are needed. The types may include: software user interface, product documentation, marketing materials, packaging and labeling, websites, customer and product support materials, multimedia, graphics.
	Proof Reading	Before translation, check the content to make sure there is no error.
	Machine Translation Post-editing	Ensure the readability and factual correctness of the translated content.

	Linguistic Testing	Verification of context and language suitability of the localized document.
	Independent language Quality Test	Ensuring language quality, consistently on any language, any product, any project.
Payment	Credit and Debit Cards	Accept Visa, JCB, MasterCard, American Express and local or abroad debit brands.
	Electronic Check Service	Business and personal paper checks are safely and securely turned into electronic transactions.
	Mobile Payments	Utilize existing hardware and technical infrastructure to accept payments by mobile devices.
	Online Payments	Customers can pay via Internet, and minimize security and concerns.
Logistics	Packaging	Suppliers must preserve, package, handle, and pack all products to protect them from loss, damage, and electrostatic discharge.
	Domestic Shipping	Suppliers must transfer ordered products within country using by company approved transportation means.
	International Shipping	Suppliers must transfer ordered products outside of country using by company approved international transportation means and special export agreements and licenses.
	Import	Suppliers in destination country must arrange carrier pickup, provide required documentation.
	Delivery to Final Destination	Delivery service should give the product to customer after checking his authorization. If customer is not available on defined address, he will be notified.

	Recording	Each supplier must maintain a system for retention, retrieval, and reproduction of original shipping, export, customs, import, and other trade-related documentation.

6. Non-functional Requirements

Architecturally significant requirements mainly fall into the non-functional category but may also include functional requirements in some cases. Non-functional requirements for enterprises should be based on the following design objectives:

Performance	The speed at which the system performs a function that meets business requirements and user expectations.
Scalability	The ability of the system to handle increasing or decreasing volumes of transactions, services and data.
Availability	The readiness of the system to perform its functions when needed in spite of errors and exceptions.
Operability	The ability of the system to fit smoothly into its environment and behave predictably.
Usability	User's perceptions of an application's usefulness, usability, and desirability based on the sum of all direct and indirect interactions.
Security	Protecting information confidentiality, integrity, availability, dependability and accountability.
Regulation	Degree of conformity with laws and regulations.
Flexibility	Ease of change to meet changing business requirements.
Feasibility	The ability of the organization to deliver the system subject to constraints of available expertise, technology, time and resources.

7. Reference

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