

Laying the Foundations for Branding as a Stable Analysis Pattern

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Abstract.

Branding is the process of creating associations between any entity and its brands. It forms a significant identity that differentiates the entity from its peers while subtly presenting the emotional and cultural image of the entity. Branding is a complex subject, which involves a creative use of identifiable graphical, verbal and written media, or any physical and behavioral features. The rationale of this paper is to cut through the complexity by laying the foundation of this interesting subject as a stable analysis pattern. To do this, we will use the Software Stability Model “SSM” [1, 2, 3, 4], and apply it to branding’s structure and behavior. The final outcome will be the Branding stable analysis pattern, which structure is meant to overcome the forces of change, and to handle transient requirements without changing the Branding stable pattern core.

Keywords: Branding, Branding Stable Analysis Pattern, Software Stability Models.

1. Introduction

Branding is a mental construct that establishes a connection between your desires and a particular entity. This connection is achieved through the use of a combination of logos, names, trademarks, tag lines, color palettes, sounds and physical and behavioral features in a manner that reflects the emotional make-up of any entity. Branding’s origin references to the earliest shepherds that branded their cattle to identify them and differentiate them from other shepherds’ cattle. Nowadays, this activity has found great acceptance in areas as diverse as Marketing and HCI. In Marketing, for instance, branding has emerged as a means for consumers to organize their understanding of the commercial world [8], to establish a pervasive means to communicate information, and to strongly mark differences among entities. In HCI, branding has come to play an important role in the definition of cost-effective, and more user-centered and intuitive user

interfaces– i.e. changing the Look and Feel of media players such as Winamp, MusicMatch, and to customize game characters like in QUAKE, etc.

Considering the nature of branding as a cross-domain concept, which sometimes passes unnoticed with respect to the unpredictable number of contexts of applicability, can be a very significant aspect, especially in areas where there is a need for some sort of subject/matter identification and differentiation, i.e. Biometry, Simulation, Gaming, Entertainment, etc.

An efficient abstraction for branding therefore should be extracted to cover the full range of applications along this spectrum. However, most of the commonly known uses of branding have been limited to a small number of areas, where the notion of reusability and adaptability were constantly overlooked. As a result, solutions were more reluctant to changes and bound to specific contexts of applicability. This result would be then translated into difficult system adaptation, poor reusability, partial scalability, and potential system collapse when dealing with transient requirements [10].

The question of how to push for a cross-domain solution or abstraction that covers different branding mechanisms or processes, and a myriad of entities and identity types to address different needs, from identity creation to branding assessment, is a complicated task. We have decided to cut through this complexity by providing a stable core knowledge for branding, applicable to any domain, using Software Stability Models “SSM” [1, 2, 3, 4]. This core knowledge lays the foundations for the branding concern that will be used by practitioners to satisfy some sort of branding need. These foundations are represented by: “the Branding Stable Analysis Pattern.”

1.1. Software Stability Models “SSM”/Brief Overview

Software Stability Models “SSM” are the visual realization of Software Stability concepts. They have come to enhance the analysis and design of any problem by providing the means for a domain enduring knowledge (stable core) separation from domain’s transient aspects. This “enduring knowledge” is realized via two Software Stability concepts’ artifacts: Enduring Business Themes (EBTs) or domain specification

classes, and Business Objects (BOs) or the significant capabilities of EBTs. The transient aspects are then represented by Software Stability concepts' last artifact called Industrial Objects (IOs) or context specific classes. By exhibiting a clear separation of knowledge, we are guaranteeing a “stable over time” structure and behavior, applicable to any recurrent branding problem, and adaptable to specific contexts by means of using extension points called Hooks [5, 10].

1.2 Paper Organization.

The paper is organized as follows: Section 2 describes the foundations for Branding as a Stable Analysis pattern using a pattern template. We conclude the paper in Section 3. Finally, a list of references is provided in Section 4.

2. Pattern Description/Structure

The intent of this pattern is to span all the structure and behavior of branding as a recurrent problem and cross-domain concern, and provide a stable solution over time, which is applicable to any domain.

2.1. Pattern Name: Branding Stable Analysis Pattern.

2.2. Context

Branding is a significant aspect in different areas as diverse as marketing, entertainment, simulation, biometric systems, and HCI. For example, in marketing, branding is intended to produce an identifiable image for services or products in a market-driven society. It is used to create something contagious that motivates people to try it, recommend it, and build a community around it [9]. In entertainment, especially in the gaming industry, branding has emerged as a means for creating more appealing and interactive games, where players are able to customize the look and behavior of their played characters on a real time basis: Changing characters' body attributes: voice, physique, movements, etc. at will. Likewise, in HCI, branding plays an important role in the user interfaces success. By using branding, developers are able to accurately craft user interfaces with a unique “look and feel” in a cost-effective manner. Furthermore, branding has been implicitly utilized in Biometric systems, where police officers or forensics scientists

were able to brand individual suspects by means of using pictures, voice patterns, retina patterns, hand geometry, etc. for posterior perusal and suspect differentiation.

The aforementioned examples have come to re-affirm that branding is a complex subject which emanates a value that is recognized locally or globally by a set of distinct practitioners with different needs. Branding's main purposes are: to drive an entity acknowledgment and create an entity differentiation. For example, within the marketing domain, Coca Cola has realized significant associations between a vast number of entities and its brands [6]. The combination of colors, font type and style, the container's particular shape, and graphical devices builds an identifiable image for Coca Cola that makes it distinctive from its competition. Moreover, within the simulation domain, especially in Chemistry, scientists needed to brand the structure and behavior of particular gases in response to certain reactions with the environment, and to simulate them three-dimensionally for posterior identification and differentiation.

2.3. Problem:

Branding is a complex subject, and can lead practitioners to misunderstanding and antagonism. The fact that branding is an domain neutral concern, which is recognized by people in a distinct geography, where visible value is driven by these people's particular emotional and cultural responses, and at the same time involves the combination of heterogeneous elements to create a vast number of identifiable entities, which allows each one of them to stand apart from other entities, makes it an issue very difficult to extract and realize as a stable model. The question driving this paper is: How can we define the branding foundations as a stable model that is applicable every time it is needed in different domains?

2.4. Challenges:

The following are the challenges we are overcoming in this paper.

- Branding is domain neutral concern that is used to create associations between entities and their brands. At such, it requires a stable over time structure and behavior applicable to any domain.
- Brandings takes a vast segment of entities as diverse as companies, consumables, countries, cloth, humans, GUI components, artificially generated subjects and characters, and any other intangible

materials. As such, it is a great challenge to capture the ultimate structure of any entity and use it in the branding process.

- Branding's image or perception is achieved by different types of identities, which are a collection of characteristics that define the entity's essence, such as logos, names, trademarks, voice and retina patterns, hand geometry, fingerprints and facial images, color palettes, sounds and tones in a manner that reflects the emotional and physical make-up of any entity. We need an aspect that portrays the wide segment of characteristics used to realize a brand.
- Branding, as an activity, is performed by a vast number of practitioners, and recognized by a wide segment of people in a given geography. The handling of distinct people's roles, within branding, must be examined.
- Branding requires an ultimate workhorse (the actual brand); this workhorse represents the mental construct that identifies the origin of any entity. This brand is driven by certain qualities which are required to be captured within its structure, such as entity appeal, identification, distinctiveness, disruptiveness, emotiveness, and much more [9]. This becomes a great challenge that must be covered in the branding solution.
- The association to be developed between any entity and its brands is determined by the invoking of a determined branding mechanism. However, there are a vast number of distinct mechanisms for branding. Therefore, this variety of mechanisms must be handled by one significant concern.

2.5. Constraints

The following are some of the perceived constraints when using this Stable Analysis pattern.

- In order to the actual brand to be associated with an entity, a process or mechanism needs to be selected by a particular party. This mechanism builds a significant association between any entity and its brands.
- Branding conceptualization per se does not contain means for conveying its visual presence across different media. This can be fulfilled by extending the pattern and adding the AnyMedia Stable Design Pattern to the branding stable core.

- Branding must adopt a particular target environment before initializing a particular mechanism to develop an association or identity between an entity and its brands.
- A brand requires at least a type of identity to associate a brand with an entity, i.e. logo, hand geometry, DNA, color palette, or name, etc.
- Branding activity must allow the branding of any entity as a whole, and the branding of the entity's sub-entities or elements.

2.6. Solution:

The following model represents a conceptual model that captures the core knowledge or foundations of branding as a domain neutral concern. Figure 1 illustrates the solution. It is worthwhile to mention that this model does not provide you with a context (IOs side) because it was meant to show only the core knowledge of branding.

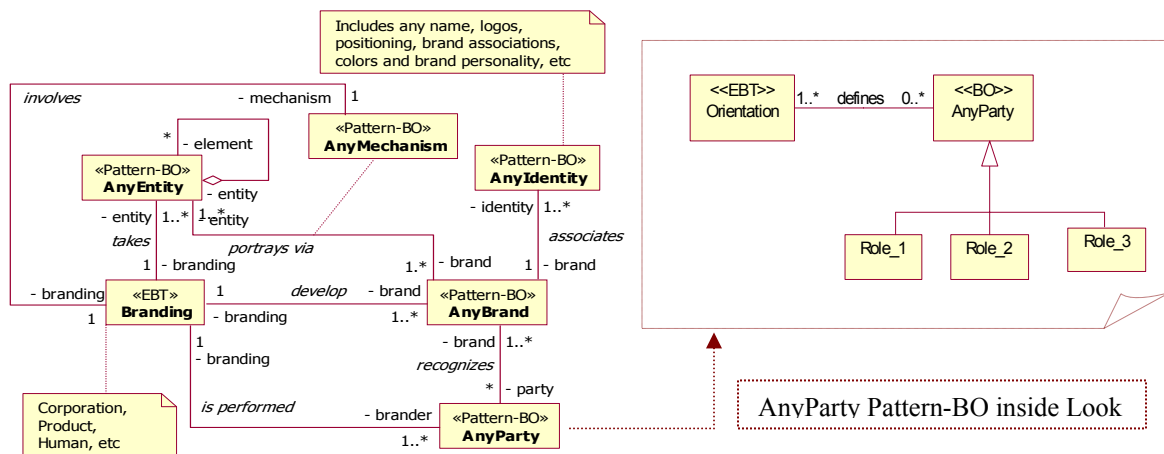


Figure 1. Branding Stable Analysis Pattern

2.6.1 Pattern Participants

Classes:

- Branding: Represents the branding process itself. The class contains the structure and behaviors that regulate branding realization.

Patterns:

- AnyEntity: Represents any entity structure and behavior that will be associated and represented by a particular brand.

- AnyBrand: Represents the key workhorse for branding realization.
- AnyIdentity: Represents the sum of all characteristics, tangible and intangible, that makes the outward manifestation of the entity's essence.
- AnyMechanism: Represents any particular mechanism(s) that describes how the branding process will be executed.
- AnyParty: Defines the different possible roles within a specific party in the branding process.

To better understand the roles of each participant in the Branding Stable Analysis Pattern, we describe this solution in the next sub-section.

2.6. 2. Branding Stable Analysis Pattern model description

Branding can be applied to corporations, products, humans, and other tangible or intangible entities. It is an activity that involves the triggering of a myriad of mechanisms intended to develop an identifiable association between any type of entity and its brands. This identifiable identity represents the sum of all tangible and intangible characteristics that create the entity's essence. This identity includes any name, logos, positioning, brand associations, and other entity's physical and behavioral features. The triggering of these significant branding mechanisms is performed by a particular party (brand creator). This party can also play the role of the brand observer.

2.7. Pattern Benefits:

The use of the Branding Stable Analysis Pattern provides the following benefits:

- A cross-domain branding definition. This definition can be used wherever the branding necessity is required. It is represented via the Branding class.
- Copes with a myriad of heterogeneous entities. Entities of different structures and behaviors were studied and core knowledge was captured and realized as the AnyEntity Pattern-BO.
- It allows the communication of any brand across a wide segment of parties. All types of parties involved in branding are covered. This aspect is represented by the AnyParty Pattern-BO.

- Facilitates the means for capturing people's perception and a brand's value via a significant identity. These are realized by the AnyIdentity Pattern-BO. This identity usually includes brand names, color, shape, voice, hand writing signature, etc.
- Branding processes or mechanisms are different in nature, however, this pattern cut through the variety of mechanisms by providing a core abstraction which captures the common behavior and structure of all types of mechanisms (AnyMechanism Pattern-BO).
- Captures the elements and behaviors that embody the realization of an identifiable aspect associated with any entity. This is embodied by the AnyBrand Pattern-BO.

2.8. Applicability

In order to illustrate the use of the Branding Stable Analysis Pattern, we provide two examples. Each one of them is different in nature and the requirements involved. The first scenario concentrates on showing the use of branding in Biometric systems. The second scenario describes the use of branding in Chemistry Simulation to create an atmospheric chemistry model.

Scenario 1, Building Biometric Systems: Biometric systems are responsible for measuring some physical property of humans such as hand geometry, retina, iris, fingerprints, and/or voice patterns. This measurement applies also to behavioral and genetic properties, such as hand writing signature, and DNA. These types of systems offer very high security and insightful functionality, such as facial scanning, camera sensing, etc. to measure physical and behavioral features of humans. Even though systems of such nature are automatic in some extent, they still require that the user (s) or operators be present in order to enroll suspects for a posterior branding. The SSM for this context of applicability is illustrated in the following figure.

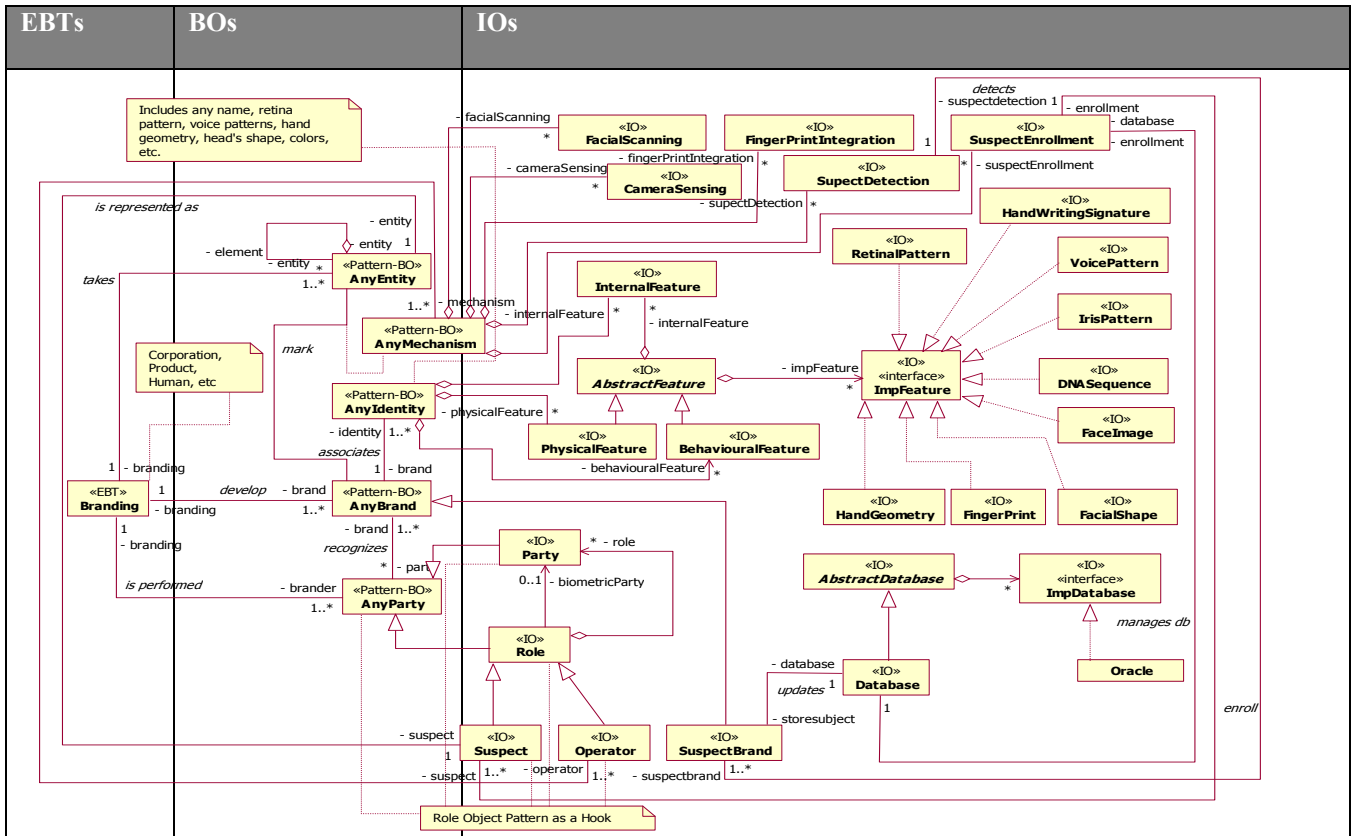


Figure 2. Building Biometric Systems using Branding Stable Analysis Pattern

Scenario 2, Building a Chemical Transport Model 3D simulation system: Chemical transport models are very compute intensive models that are intended to simulate and identify the behavior and seasonal evolution of trace gases to predict climate changes. Scientists needed then a system that would ease the processes of applying, visualizing, associating certain properties, chemical reactions based on certain environmental effects, such as wind, surface emission, temperature, precipitation, etc. to trace gases, and give them a unique identification in a transport model that can be visualized and manipulated in a 3D simulated environment. The following SSM represents a concise version of the system.

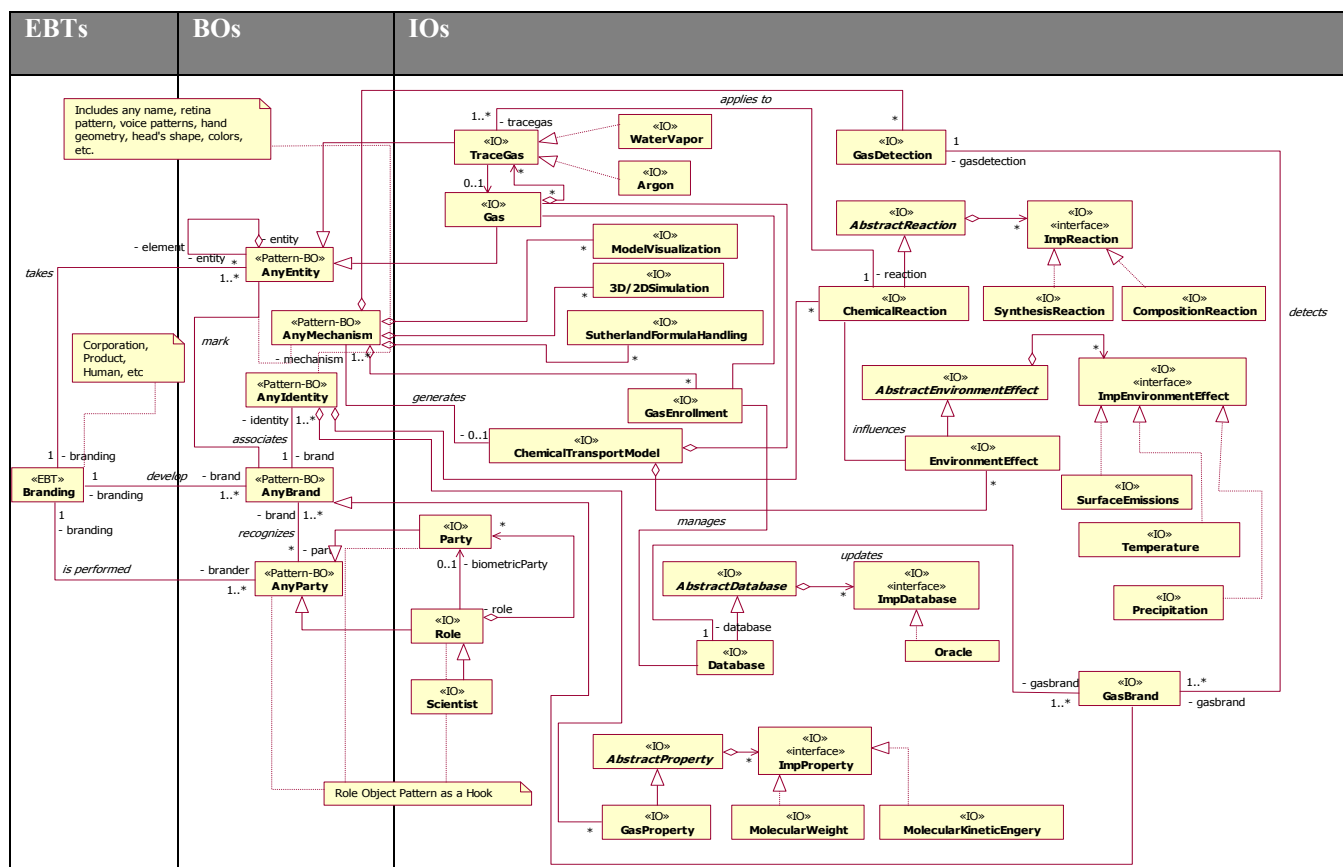


Figure 3: SSM for Branding in the Chemistry Simulation domain

3. Conclusion:

The objective of this paper was to cut through the complexity of branding as a cross-domain concern and provide its foundations as a stable model, which is applicable to recurrent branding problems. We achieved this objective by applying Software Stability Concepts and its SSM to the analysis and discovery process, thereby determining a stable and enduring solution for branding: the Branding Stable Analysis Pattern. The paper also provides a significant description of the pattern, along with the challenges and constraints involved during its discovery.

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