

Using Personas to Support the Goals in User Stories

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Abstract—This paper proposes a conceptual framework, motivated by personas and composed of certain interrelated artifacts, to provide a better support for the goals included in the contents of structured user story statements.

Keywords—agile methodology; artifact; ethnography; quality; software requirements engineering; traceability

I. INTRODUCTION

In the development of interactive systems relying on certain agile methodologies, software requirements are usually expressed as user stories [1]. Typically, a user story description consists of, among other things, a statement. To be amenable to humans as well as to machines, a user story statement can be structured such that it includes a role and a corresponding goal [1]. A *role* is a fictional character based on possible interactions with a software system [2]. A role is abstract and can be elicited by introspection, and therefore it may reflect only a putative user. A *persona* is archetypical user of a software system [2]. A persona is concrete and is elicited through extrospection, such as through ethnographic research techniques. Indeed, a persona can be seen as an instantiation of a role. A *goal* is an intended outcome of user interaction with a software system. It provides the rationale for the existence of a user story. For software to be able to provide desired services to its potential users there needs to be verifiable parity between a user story's goal and a user's goal. Therefore, exploring the relationships between role, persona, and goal, is important.

II. A CONCEPTUAL FRAMEWORK FOR SUPPORTING THE GOALS IN USER STORY STATEMENTS

The ISO/IEC/IEEE 26515 Standard suggests that certain information, as shown in Fig. 1, be included in a persona description [1].

(Mandatory)	(Optional)
<ul style="list-style-type: none"> Character Name Job Title Experience Relevant Skills Business Goals 	<ul style="list-style-type: none"> Photograph Age Education Organization Major Responsibilities Goals and Tasks that the User wants to Complete <ul style="list-style-type: none"> The Problem or Business Opportunity that the Product Solves for the User's Organization The User's Physical and Social Environment The Software and Hardware Platforms the User is Using Size of the Organization

Figure 1. The persona information as per the ISO/IEC/IEEE 26515 Standard.

This information is not only about the user, but also about user's goals, as well as the underlying context and the context of use of a software system. Thus, it can serve as input towards formulating a conceptual framework of artifacts, as shown in Fig. 2, that supports 'high-quality' user story engineering.

In Fig. 2, each layer (is composed of interrelated conceptual models and/or documents and) depends on the layer(s) beneath it. This dependency underscores the need for multiple artifacts in user story engineering. It also serves as a starting point for horizontal as well as vertical traceability in user stories.

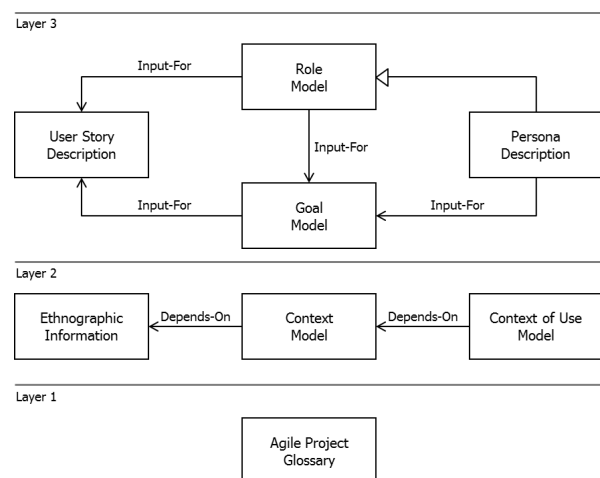


Figure 2. A layered arrangement of interrelated artifacts of an agile project.

III. CONCLUSION

The attention on the goals brings the user stories closer to goal-oriented requirements engineering. If a software system is viewed as a boundary object, the opportunity of its use also raises the potential for its misuse, such as by a negative persona. Therefore, exploring the relationships between negative personas and their goals in negative user stories is an area of future research interest.

REFERENCES

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