ABSTRACT

This chapter presents an ontology for customer complaint management, which has been developed in the CCFORM project. CCFORM is an EU funded project (IST-2001-38248) with the aim of studying the foundation of a central European customer complaint portal. The idea is that any consumer can register a complaint against any party about any problem, at one portal. This portal should: support 11 languages, be sensitive to cross-border business regulations, dynamic, and can be extended by companies. To manage this dynamicity and to control companies’ extensions, a customer complaint ontology (CContology) has to be built to underpin the CC portal. In other words, the complaint forms are generated based on the ontology. The CContology comprises classifications of complaint problems, complaint resolutions, complaining parties, complaint-recipients, “best-practices”, rules of complaint, etc. The main uses of this ontology are (1) to enable consistent implementation (and interoperation) of all software complaint management mechanisms based on a shared background vocabulary, which can be used by many stakeholders. (2) to play the role of a domain ontology that encompasses the core complaining elements and that can be extended by either individual or groups of firms; and (3) to generate CC-forms based on the ontological commitments and to enforce the validity (and/or integrity) of their population. At the end of this chapter, we outline our experience in applying the methodological principles (Double-Articulation and Modularization) and the tool (DogmaModeler) that we used in developing the CContology.
INTRODUCTION AND MOTIVATION

Current Situation

The use of the Internet for cross-border business is growing rapidly. However, in many cases, the benefits of electronic commerce are not exploited fully by customers because of the frequent lack of trust and confidence in online cross-border purchases. To achieve fair trading and transparency in commercial communications and transactions, effective cross-border complaint platforms need to be established and involved in e-business activities (Claes, 1987) (Cho et al, 2002) (ABA, 2002).

The CCFORM project aims to study and reach a consensus about the foundation of online customer complaint mechanisms by developing a general but extensible form (called CC-form) which has widespread industry and customer support. This CC-form must facilitate cross-language communication to support cross-border e-commerce and should be easy to implement in software tools. The CC-form will raise the basic agreement about complaint handling, and should be extended in vertical markets (e.g. hotels, banks, factories, or even governments) to provide sector-wide solutions to allow service providers to gain competitive advantages (see Figure 1).

Problem Statement

There are several challenges involved in establishing and agreeing on such a CC-form: (1) Legal bases: the sensitivity of cross-border business regulations and privacy issues. (2) The diversity of language and culture: controlling and agreeing on the semantics of the complaint terminology so that the intended meaning of the term gets across, even in the different languages. (3) Consumer sensitivity and business perspectives. (4) Extensibility: the flexibility of extending the CC-form (perhaps dynamically) according to market needs and standards. This would mean for example, extending the kinds of problems that a complainant can complain about, extending the kinds of complaint resolutions, managing who may extend what, etc.

Figure 1. Depiction of the CCform design