A collaborative approval process for accessing sensitive data

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Abstract: A collaborative environment to improve and streamline approval processes online is presented. A scenario for approving requests to access sensitive medical data records for research purposes from a medical data warehouse at a teaching hospital is used to illustrate the special requirements needed for collaborative approval processes. The architectural framework to support such processes is defined. It includes support for collaborative signatures, a service-oriented architecture to integrate security mechanisms, policy-based control to address privacy issues and categorisation and anonymisation of data along multiple dimensions to control access within a collaborative environment.

Keywords: security; privacy; digital signature; data anonymisation; collaborative environment.

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1 Introduction

Organisations around the world are now collecting large amounts of data about the services they provide to individuals. These data are processed, distributed and shared to better manage their operations and improve the quality of the services they provide. Frichman and Cronin (2003) provide an excellent summary of the benefits and challenges of such information-rich electronic commerce technology. There is a great potential benefit for public and private research on that data to address issues that are in the public interest such as health, law enforcement and safety. However, as discussed in Peyton and Hu (2005) this must be balanced against the great potential to misuse such information. The data (e.g. health care data) is either a sensitive or personal nature. The possible conclusions