Chapter 15

Reliability and Scalability of Service Oriented Architecture in Web Services: Signature Verification

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ABSTRACT

The use of Information Technology through Web services has been a major technology trend in the IT industry. IT promoted as a means of reducing costs, increasing reuse, simplifying integration and creating more active infrastructures. Web services replace other methods and technologies used in design, development, deployment and integration, and management services. It also allows different applications to exchange data with one another. SOA separates functions into distinct units or services, thus users can combine and reuse them in the production of various applications via modularity of functions. Here we are taken Signature verification application for dealing all these activities like online verification, offline verification, pressure, thickness, strength, etc. Software is componentized and the components are distributed among the devices available in the distributed environment with respect to their computational strength.

LITERATURE REVIEW

Handwritten signature verification is the process of confirming the identity of a user based on the handwritten signature of the user as a form of behavioral biometrics. Automatic handwritten signature verification is not a new problem. Many early research attempts were reviewed in the survey papers. The primary advantage that signature verification has over other types of biometric technologies is that handwritten signature is already the most widely accepted biometric for identity verification in daily use. The long history of trust over signature verification means that people are very willing to accept a signature-based biometric authentication system. However, there has not been any major interna-
tional effort that aims at comparing different signature verification methods systematically. As common benchmark databases and benchmarking rules are often used by researchers in such areas as information retrieval and natural language processing, researchers in biometrics increasingly see the need for such benchmarks for comparative studies.

INTRODUCTION

Many applications in image science require similarity retrieval of an image from a large collection of images. This project deals with this issue in the context of a database of handwritten signature images and describes a system for similarity retrieval and identification of handwritten signature images. Similarity retrieval of images has two components.

1. What should be the measure of similarity?
2. How should similar images be identified?

Linked to both these components are the issues of image representation, Indexing and matching. So that images similar to the query image can be retrieved without excessively searching the database. The aim of this work is to address these issues in the context of a database of handwritten signature images to provide a solution to the problem of handwritten signature identification which refer to the process of identifying an individual on the basis of his or her signature. It is important problem in practical applications in banking, commerce and law. The advantage of these features is that they give the virtual model of the signature irrespective of the size and orientation.

The other advantage is that it is tolerant of missing features and allows even partial signatures. The proposed system can be further developed by adding few more features in future. The handwritten signature has long held position of importance in society. It is a symbol of consent, authentication, responsibility and authorization. The prime incentive to duplicate a signature has remained constant: financial gain.

BACKGROUND

With the development of widely dispersed networks of computer terminals, automatic tellers and databanks, there has been a corresponding increase in computer crime and growing need to protect the sensitive information assets. An important aspect of this problem is personal identification, that is, the ability to ensure that only the authorized people get access to resources (Fox, 2004). A method of personal identification that cannot be lost, stolen or forgotten is required for control of computer access, building access or automated banking. Because the signature is the normal and customary way of identifying an individual, it has many natural advantages over other techniques such as fingerprints or voice recognition. How in the sense, suppose a person has cold then his voice would not be same as his original voice. Signatures are the most popular validation tools for documents or commercial transactions.

If computers can be made intelligent enough to understand human handwriting it will be possible to make man-computer interfaces more ergonomic and attractive. With this motivation considerable re-