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Information technology — Security techniques — Requirements for partially anonymous, partially unlinkable authentication

Technologies de l'information — Techniques de sécurité — Exigences pour l'authentification partiellement anonyme, partiellement non fiable

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

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Introduction

The current state of the art for entity authentication requires the revelation of the identifiable information of an entity being authenticated. In many types of transactions, the entity would prefer to remain anonymous and unlinkable, which means that when two transactions are performed, it is difficult to distinguish whether the transactions are performed by the same user or two different users. However, in some circumstances there are legitimate reasons to enable subsequent reidentification (e.g., the interest of accountability). The term 'partially anonymous, partially unlinkable' means that an a priori designated opener, and that designated opener only, can identify the authenticated entity. For example, a library may need to identify an entity that has not returned a borrowed book in order to send a late notice to the entity. Current cryptographic technologies are available to provide partially anonymous, partially unlinkable authentication. This International Standard defines a framework and requirements for partially anonymous, partially unlinkable authentication.