

Health informatics — Messages and communication — Web access to DICOM persistent objects

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee IST/35, Health informatics, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii to v, a blank page, pages 1 to 17 and a back cover.

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INTERNATIONAL STANDARD

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Health informatics — Messages and communication — Web access to DICOM persistent objects

*Informatique de santé — Messages et communication — Accès au web
pour les objets persistants DICOM*



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Foreword

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

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ISO 17432 was prepared by Technical Committee ISO/TC 215, *Health informatics* in liaison with DICOM and is equivalent to DICOM Part 18, Supplement 85.

Introduction

The DICOM standard is well accepted in the medical imaging area, including radiology, cardiology, pathology, radiotherapy as well as specialities using visible light imaging equipment (e.g. endoscopes, microscopes).

The requesters of medical imaging studies and care providers require rapid and reliable access to reports and images. Within computerized environments such access is increasingly based on web technologies. Access to relevant DICOM persistent objects is required without the need for duplication of such data objects.

Clinicians need to have access either to the original data in native DICOM format that allows extensive manipulation using specialized software which makes use of the detailed DICOM meta-data, or rendered into a generic format (e.g. JPEG, PDF) that can be presented with off-the-shelf applications.

This International Standard specifies the means whereby a request for access to a DICOM persistent object is to be expressed as an HTTP URL/URI (see IETF RFC2396) request which includes a pointer to a specific DICOM persistent object in the form of its instance UID. The request also specifies the format of the result to be returned in response to the request. Examples include:

- a) (MIME) content-type (e.g. application/dicom or image/jpeg for images, application/dicom or application/rtf or xml for reports);
- b) content-encodings;
- c) reports as HL7/CDA Level 1.

The parameters of the query URL as defined within this International Standard are sufficient for the HTTP server to act as a DICOM SCU (Service Class User) to retrieve the requested object from an appropriate DICOM SCP (Service Class Provider) using baseline DICOM functionality as defined in DICOM PS 3.4 and DICOM PS 3.7.

Specifications of requirements for additional DICOM persistent objects and formats for the responses from the server will be produced in the future as required.

