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Health Informatics — Reference standards portfolio (RSP) — Clinical imaging

Informatique de santé — Normes de référence du portefeuille (REEECI) — Imagerie clinique

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee, ISO/TC 215, *Health informatics*.

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Introduction

Modern healthcare is supported by medical devices and information systems that capture, manage, exchange, process and present clinical, operational, research and public health data. This occurs at scales from individual clinics and hospital departments, up to networks of hospitals and regional or national healthcare systems. Adopting standards and using them consistently would make it easier to install, operate and, over time, update and replace these devices and information systems.

This document presents a portfolio of standards that have been selected as being mature, fit for purpose and most appropriate to address use cases related to the clinical imaging domain. Clinical imaging is considered throughout the enterprise.

It should be noted, however, that achieving full interoperability within a given environment or set of systems is a large endeavor of which the selection of underlying standards is an important component, but just one component. Additional guidance can be found in the Process clause of the TR on IHE Global Standards Adoption [1].

This document was developed based on concepts and methodology described in the Healthcare Informatics – Reference Standards Portfolio (RSP): Development framework. RSPs are an evolution of past work, such as that done by the Board of Directors of the American Medical Informatics Association[2] and the Joint Initiative Council (JIC) work on the Patient Summary Standards Set[28].

This work reflects the experience and learning of the international community in developing interoperability standards in the clinical imaging domain, including representatives of:

— DICOM®[1)] (Digital Imaging and Communication in Medicine)

— IHE Radiology (Integrating the Healthcare Enterprise)

— ISO/TC215, Health Informatics.

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1) DICOM® is the registered trademark of the National Electrical Manufacturers Association for its standards publications relating to digital communications of medical information. This information is given for the convenience of users of this document and does not constitute an endorsement by ISO.

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Health Informatics — Reference standards portfolio (RSP) — Clinical imaging

1 Scope

This document establishes the Reference Standards Portfolio (RSP) for the clinical imaging domain (as defined in Clause 4).

An RSP lists the principle health information technology (HIT) standards that form the basis of implementing and deploying interoperable applications in the target domain.

An RSP includes a description of the domain, a normative list of standards, and an informative framework for mapping the standards to example deployment use cases.

The lists do not include standards that are specifically national in scope.

The primary target audience for this document is policy makers (governmental or organizational), regulators, project planners and HIT managers. This document will also be of interest to other stakeholders such as equipment and HIT vendors, clinical and health information management (HIM) professionals and standards developers.

The intended usage of this document is to inform decisions about selecting the standards that will form the basis of integration projects in geographic regions or healthcare organizations. For example:

— What standards to use for capturing/encoding/exchanging certain types of information

— What standards to use for interfaces between the devices and information systems that support information capture, management, exchange, processing and use

— What standards to use for specific use cases/deployment scenarios

The selected standards, and/or corresponding RSP clauses, might be useful when drafting project specifications.

Figure 1 shows the conceptual organization of this document. The top part represents individual HIT standards grouped under semantic, technical and functional interoperability categories. The bottom part shows use cases for example implementation projects with a selected list of standards.

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