



# SLOVENSKI STANDARD

## SIST ENV 12623:2003

01-oktober-2003

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**Medicinska informatika – Izmenjevanje nosilcev podatkov pri komuniciranju z medicinskimi slikami (MI-MEDICOM)**

Medical Informatics - Media Interchange in Medical Imaging Communications (MI-MEDICOM)

Medizinische Informatik - Austausch von Medien bei der medizinischen Bildkommunikation (MI-MEDICOM)

Informatique de santé - Echange de supports dans les communications d'images médicales (MI-MEDICOM)

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**Ta slovenski standard je istoveten z: ENV 12623:1997**

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**ICS:**

35.240.80

Uporabniške rešitve IT v  
zdravstveni tehniki

IT applications in health care  
technology

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**en**

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EUROPEAN PRESTANDARD

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PRÉNORME EUROPÉENNE

EUROPÄISCHE VORNORM

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English version

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CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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# CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Media Interchange for Medical Imaging Communication

## Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 251 "Medical informatics", the secretariat of which is held by IBN.

It has been produced in close co-operation with the ACR (the American College of Radiology) the ACC (American College of Cardiology), the ESC (European Society of Cardiology) and NEMA (the National Electrical Manufacturers Association). This Standard is aligned with the recent Supplements to Digital Imaging and Communications in Medicine (DICOM) for Media Interchange for which CEN/TC251/PT4-019 has provided direct input and review to ensure that European Requirements are met.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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## 0 Introduction

This European Prestandard is a supplement to the MEDICOM Standard produced by CEN/TC 251. It expands the field of application of MEDICOM beyond the on-line network exchange of medical images and related data to the interchange of removable storage media.

Like the MEDICOM Networking European Prestandard, this Supplement is closely aligned with DICOM and references three additional Parts of DICOM for Media Storage which have been published by NEMA.

## 1 Scope and Field of Application

This European Prestandard specifies a general model for the storage of Medical Imaging information on removable media. The purpose of Part 10 is to provide a framework allowing the interchange of various types of medical images and related information on a broad range of physical storage media.

This European Prestandard specifies:

- a layered model for the storage of medical images and related information on storage media;
- a generic file format supporting the encapsulation of any Information Object Definition;
- a basic file service providing independence from the underlying media format and physical media;
- a initial set of 4 physical media and associated media formats. The physical media addressed in this European Prestandard are:
  1. 130 mm Magneto Optical Disk (600 MB and 1.3 GB)
  2. 90 mm Magneto Optical Disk (128 MB)
  3. 120 mm CD-R (640 MB)
  4. 90 mm floppy disk (1.4 MB);
- Additional Physical Media may be added as technology evolves through the use of the same registration process as defined in the MEDICOM Networking PrENV (Annex A).
- the concept of Media Storage Application Profiles, which specify application specific subsets of this European Prestandard to which an implementation may claim conformance. Such a conformance statement applies only to the writing, reading and updating of the content of storage media. Only the Basic Cardiac Application Profile is specified in this European Prestandard. Additional Application Profiles may be added as clinical needs are identified through the use of the same registration process as defined in Annex A of the MEDICOM Prestandard for Networking.

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This European Prestandard does not specify:

- A testing/validation procedure to assess an implementation's conformance to the Standard;
- The implementation details of any features of the Standard for devices claiming conformance;
- The overall set of features and functions to be expected from a system implemented by integrating a group of devices each claiming conformance to the Standard.

Even though the Standard has the potential to facilitate implementations of Picture Archiving and Communications Systems (PACS) or Image Management and Communications Systems (IMACS), use of the Standard alone does not guarantee that all the goals of an image archiving and management system will be met. This Standard facilitates interoperability of systems claiming conformance in a multi-vendor environment, but does not, by itself, guarantee interoperability.

This Standard is applicable to exchange of all types of diagnostic and therapeutic images and the associated image related information. Numerous extensions are envisaged to support future medical imaging applications. The introduction of these extensions is facilitated by ensuring that Service Classes, Information Objects and Data Elements are specified in separate Parts. Such Parts may be rapidly updated through the use of the same registration process as defined in Annex A of the MEDICOM Prestandard for Networking.

This European Prestandard is based on a general communication architecture for medical imaging presented in Figure 1. It identifies a Medical Imaging Application which uses the communication services offered by an Application Entity. In turn this Application Entity relies on:

- Media Formats and Physical Media for off-line communication. This is addressed by this European Prestandard. Annex B provides a brief description of the contents of each of the DICOM Parts referenced by this European Prestandard;
- Application Profiles and Transport Profiles for on-line communication. This has been addressed by the existing MEDICOM European Prestandard for networking.

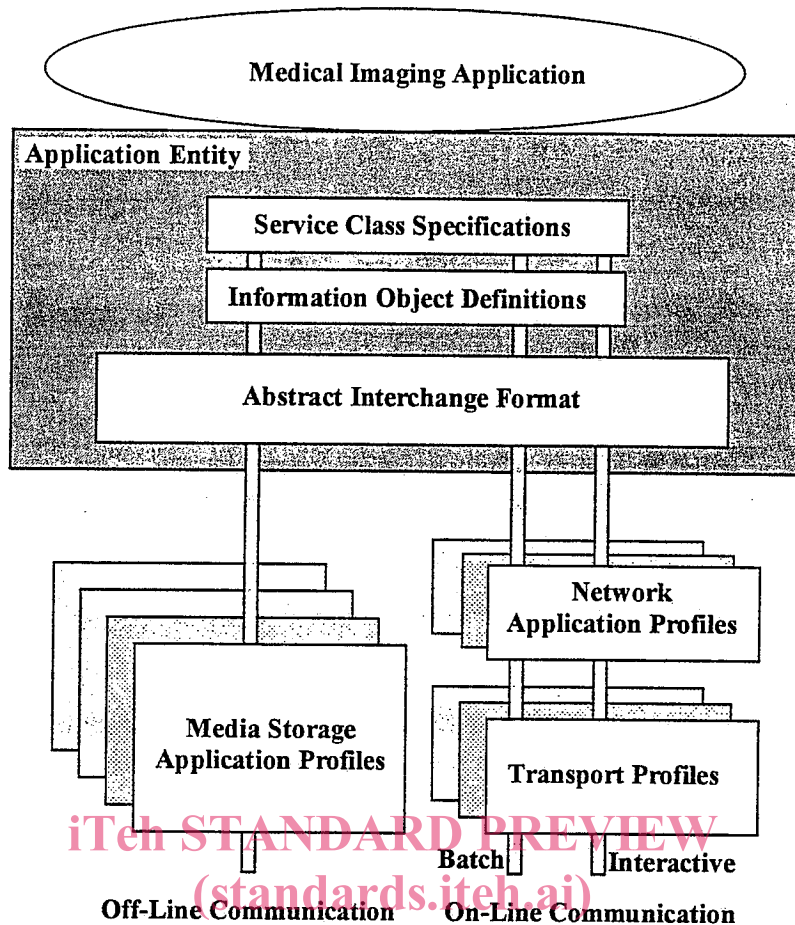


Figure 1 - General Communication Architecture for Medical Imaging

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## 2 Normative References

CEN/TC251/N94-069, 1994, Medical Image and Related Data Interchange Format Standards - MEDICOM

NOTE: This reference will change with the changing status of the MEDICOM Standard

NEMA PS3-2, 1993, Digital Imaging and Communications in Medicine, Part 2 - Conformance.

NEMA PS3-3, 1993, Digital Imaging and Communications in Medicine, Part 3 - Information Object Definitions.

NEMA PS3-4, 1993, Digital Imaging and Communications in Medicine, Part 4 - Service Class Specifications.

NEMA PS3-5, 1993, Digital Imaging and Communications in Medicine, Part 5 - Data Structure and Encoding.

NEMA PS3-6, 1993, Digital Imaging and Communications in Medicine,



Media Interchange for Medical Imaging Communication  
Part 6 - Data Dictionary.

NEMA PS3-7, 1993, Digital Imaging and Communications in Medicine,  
Part 7 - Message Exchange.

NEMA PS3-8, 1992, Digital Imaging and Communications in Medicine,  
Part 8 - Network Communication Support for Message Exchange.

NEMA PS3-10, 1995, Digital Imaging and Communications in Medicine,  
Part 10 - Media Storage and File Format for Media Interchange - Addenda on Directory,  
Media Storage Service Class and Data Dictionary

NEMA PS3-11, 1995, Digital Imaging and Communications in Medicine,  
Part 11 : Media Storage Application Profiles - Addenda on Conformance

NEMA PS3-12, 1995, Digital Imaging and Communications in Medicine  
Part 12 : Media Format and Physical Media for Media Interchange

Note: PS3-10 and PS3-11 include not only the new Parts 10 and 11 respectively, but also related Addenda to existing Parts of DICOM. These Addenda do not change but simply extend already approved Parts of MEDICOM.

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