

NEMA IIC 1 v01

Digital Imaging and
Communications in
Security (DICOS)
Information Object
Definitions (IODS)



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**DIGITAL IMAGING AND
COMMUNICATIONS IN
SECURITY (DICOS)
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DEFINITIONS (IODS)**

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NEMA Standards Publication IIC 1 v01

*Digital Imaging and Communications in Security (DICOS)
Information Object Definitions (IODs)*

A DICOS® Publication

Published by:

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FOREWORD

The Digital Imaging and Communications in Security (DICOS) standard, this Standards Publication, is formally designated as NEMA IIC 1 v01. NEMA IIC 1 v01 is inspired by, and relies heavily on, elements of Digital Imaging and Communications in Medicine (DICOM). NEMA IIC 1 v01 adapts DICOM as necessary for security screening applications. While NEMA IIC 1 v01 is retained as the formal standard designation, NEMA IIC 1 v01 is referenced informally as DICOS v01.

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The NEMA Industrial Imaging and Communications Section (04 IIC) developed this Standards Publication. Section approval of the standard does not necessarily imply that section members voted for its approval or participated in its development. At the time it was approved, the Section was composed of the following members:

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Reveal Imaging Technologies, Inc.—www.revealimaging.com
Siemens Corporation—www.usa.siemens.com
Smiths Detection Americas—www.smithsdetection.com
SureScan Corporation—www.surescaneds.com

In addition to the many member efforts, recognition is also given to those organizations that supported the development of this Standards Publication by participating in development efforts, providing comment, and providing funding:

- US Department of Homeland Security, Science and Technology Directorate
- US Department of Homeland Security, Transportation Security Administration

Recognition is also given to those organizations that supported the development of this Standards Publication through coordination, by participating in development efforts, or by providing comment, including:

- US National Institute of Standards and Technology (NIST)
- Battelle Memorial Institute
- Lawrence Livermore National Laboratory

- Sandia National Laboratories
- US Navy Space and Naval Warfare Systems Command (SPAWAR)

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Section 1 SCOPE

The Digital Imaging and Communications in Security (DICOS) standard, designated as NEMA IIC 1 v01, provides a data interchange protocol and interoperable, extensible file format to facilitate data information interchange (demographic information, x-ray radiographs, CT images, material specific information, trace detection signatures, threat assessment, etc.) of objects of inspection (checked luggage, carry-on luggage, parcels, and personnel, etc.) for security screening applications.

NEMA IIC 1 v01 is inspired by, and relies heavily on, elements of Digital Imaging and Communications in Medicine (DICOM). NEMA IIC 1 v01 adapts DICOM as necessary for security screening applications. Reflecting its DICOM heritage, NEMA IIC 1 v01 includes many references to certain elements of the DICOM standard. In text, these references take the general form “see DICOM PS X.Y.” Other elements of NEMA IIC 1 v01, while initially inspired by DICOM, have been adapted for airport security screening applications. NEMA IIC 1 v01 reflects these adaptations.

NOTE—From this point forward, while NEMA IIC 1 v01 is retained as the formal standard designation, NEMA IIC 1 v01 is referenced as DICOS v01, its informal designation.

1.1 REFERENCES

The following standards (normative references) contain provisions which, through reference in this text, constitute provisions of DICOS v01. Other documents and standards (other references) are referenced that might provide a more complete understanding. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on DICOS v1 are encouraged to investigate the possibilities of applying the most recent editions of the standards indicated.

1.1.1 Normative References

1.1.1.1 National Electrical Manufacturers Association (NEMA)

NEMA *Digital Imaging and Communications in Medicine (DICOM) Part 1: Introduction and Overview*, ftp://medical.nema.org/medical/dicom/2009/09_01pu.pdf

NEMA *Digital Imaging and Communications in Medicine (DICOM) Part 3: Information Object Definitions*, ftp://medical.nema.org/medical/dicom/2009/09_03pu.pdf

NEMA *Digital Imaging and Communications in Medicine (DICOM) Part 4: Service Class Specifications*, ftp://medical.nema.org/medical/dicom/2009/09_04pu.pdf

NEMA *Digital Imaging and Communications in Medicine (DICOM) Part 5: Data structures and encoding*, ftp://medical.nema.org/medical/dicom/2009/09_05pu.pdf

NEMA *Digital Imaging and Communications in Medicine (DICOM) Part 6: Data Dictionary*, ftp://medical.nema.org/medical/dicom/2008/08_06pu.pdf

NEMA *Digital Imaging and Communications in Medicine (DICOM) Part 10: Media Storage and File Format for Media Interchange*, ftp://medical.nema.org/medical/dicom/2008/08_10pu.pdf