

American Dental Association
Technical Report No. 1048

Attachment of DICOM Datasets Using E-Mail in Dentistry

*A Technical Report prepared by the American Dental Association
and registered with ANSI.*

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AMERICAN DENTAL ASSOCIATION TECHNICAL REPORT NO. 1048 FOR ATTACHMENT OF DICOM DATASETS USING E-MAIL IN DENTISTRY

The Council on Dental Practice of the American Dental Association has approved American Dental Association Technical Report No. 1048 for Attachment of DICOM Datasets Using E-Mail in Dentistry. Working Groups of the ADA Standards Committee on Dental Informatics (SCDI) formulate this and other specifications and technical reports for the application of information technology and other electronic technologies to dentistry's clinical and administrative operations. The ADA SCDI has representation from appropriate interests in the United States in the standardization of information technology and other electronic technologies used in dental practice. The ADA Standards Committee on Dental Informatics confirmed approval of ADA Technical Report No. 1048 on January 13, 2011.

Publication of this technical report that has been registered with ANSI has been approved by the American Dental Association, 211 E. Chicago Ave., Chicago, IL 60611. This document is registered as a technical report according to the *Procedures for the Registration of Technical Reports with ANSI*. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on this document should be sent to the American Dental Association, 211 E. Chicago Ave., Chicago, IL 60611.

This technical report was prepared by SCDI Working Group 12.1 for Application of the DICOM Standard to Dentistry.

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FOREWORD

(This Foreword does not form a part of ADA Technical Report No. 1048 for Attachment of DICOM Datasets Using E-mail in Dentistry).

In 1992, there was interest in the standardization of clinical information systems related to electronic technology in the dental environment. After evaluating current informatics activities, a Task Group of the ANSI Accredited Standards Committee MD156 (ASC MD156) was created by the ADA to initiate the development of technical reports, guidelines, and standards on electronic technologies used in dental practice. In 1999, the ADA established the ADA Standards Committee on Dental Informatics (SCDI). The ADA SCDI is currently the group that reviews and approves proposed American National Standards (ANSI approved) and technical reports developed by the standards committee's working groups. The ADA became an ANSI accredited standards organization in 2000.

The scope of the ADA SCDI is:

To promote patient care and oral health through the application of information standards and technology to dentistry's clinical and administrative operations; to develop standards, specifications, technical reports, and guidelines for: components of a computerized dental clinical workstation; electronic technologies used in dental practice; and interoperability standards for different software and hardware products which provide a seamless information exchange throughout all facets of healthcare.

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1 SCOPE

This report provides a technical specification based on the DICOM (Digital Imaging and Communications in Medicine) version 3 Standard as it applies to dentistry with the goal of increasing interoperability between practitioners. In particular, this report highlights the benefits of the ZIP File over E-mail Interchange Profiles of the DICOM Standard for dentists or specialists who don't share the same image data repository, but need to exchange patient data in a fast and secure manner.

The full *DICOM version 3 Standard* is available for download on the webpage of the National Electrical Manufacturers Association (NEMA), <http://medical.nema.org>. The DICOM Standard provides details and specific explanations that are beyond the scope of this ADA technical report.

2 INTRODUCTION

The ADA endorses the use of DICOM as the standard means for exchange of all digital dental images. DICOM provides the practitioners with a powerful mechanism for the exchange of patient images in their original diagnostic quality and therefore ensures better patient care. This report extends the specifications of *ADA Technical Report No. 1023 for Implementation Requirements for DICOM in Dentistry* using e-mail exchanges.

3 FUNCTIONAL USE CASE

The purpose of the use case presented in this section is to illustrate the need, in some circumstances, for e-mail technologies to enable patient data transfer between practitioners, when copying files onto and mailing numerous CD-ROMs is a solution they would like to avoid. Figure 1 illustrates a possible use case schematic.

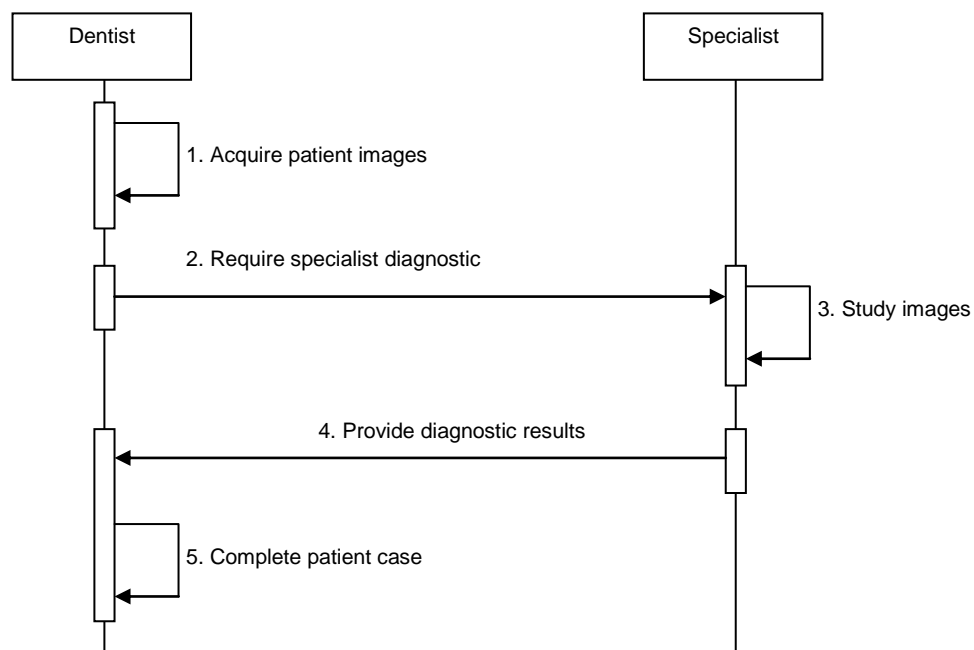


Figure 1. Possible use case schematic .