ASTM E31
Security Standards

Jan Lovorn for Ted Cooper, MD
Kaiser Permanente
Subcommittee E31.20 Chair

Introduction

- Goal - Provide Overview
- ASTM
- Committee E31
- Subcommittees E31.17 & E31.20
  - Current Standards
  - Work in progress

ASTM

- American Society for Testing and Materials
- Founded 1898
- 32,000 Members, 100 Countries
- 10,000 Standards
- ANSI accredited
- Consensus ballot process
- Individual membership $ 75/year
  - Includes all E31 Standards on CD-ROM or paper

ASTM E31

- ASTM Committee E31 on Healthcare Informatics develops standards related to the architecture, content, storage, security, confidentiality, functionality, and communication of information used within healthcare and healthcare decision making, including patient-specific information and knowledge.
- Established in 1970
- 270 members
- 30+ approved standards and additional draft standards.
- Approved standards are published annually in June in the Annual Book of ASTM Standards, Volume 14.01.

ASTM E31 Subcommittees

E31.01 Controlled Health Vocabularies for Healthcare Informatics
E31.10 Pharmaco-informatics Standards
E31.13 Clinical Laboratory Information Management
E31.16 Interchange of Electrophysiological Waveforms & Signals
E31.17 Privacy, Confidentiality, and Access
E31.19 Electronic Health Record Content and Structure
E31.20 Data and System Security for Health Information
E31.22 Health Information Transcription and Documentation
E31.23 Modeling for Health Informatics
E31.24 Electronic Health Record (EHR) System Functionality
E31.25 XML Document Type Definitions (DTDs) for Health Care
E31.26 Personal (Consumer) Health Records
E31.27 Data Capture and Reporting

E31.90 Executive
E31.95 Education and Publicity

ASTM E31.17 & E31.20

- E31.17 - Access, Privacy, and Confidentiality of Health Information
  - to develop policy standards that address access, privacy, confidentiality, and data security of health information in its many forms and locations.
- E31.20 - Data and System Security for Health Information
  - to develop security service and mechanism standards for healthcare information and systems.

ASTM E31.17 - Current Standards

- E1869-97 Standard Guide for Confidentiality, Privacy, Access, and Data Security Principles for Health Information Including Computer-Based Patient Records
- E1986-98 Standard Guide for Information Access Privileges to Health Information
- E1987-98 Standard Guide for Individual Rights Regarding Health Information
- E1988-98 Standard Guide for Training of Persons who have Access to Health Information
- E2017-99 Standard Guide for Amendments to Health Information
- PS115-99 Provisional Standard Specification for Audit and Disclosure Logs for Use in Health Information Systems

ASTM E31.20 - Current Standards

- E2085-00 Guide On Security Framework For Healthcare Information
- E1714-95 Standard Guide for Properties of a Universal Healthcare Identifier (UHID)
- E2086-00 Guide For Internet And Intranet Healthcare Security
- E1762-95 Standard Guide for Electronic Authentication of Health Care Information
- E1985-98 Standard Guide for User Authentication and Authorization
- E2084-00 Specification For Authentication Of Healthcare Information Using Digital Signatures

ASTM E 31.20 Under Development

- Standard Specification for Public Key Infrastructure Healthcare Model Certificate Policy
- Standard Specification for Directory Attributes for PKI
- Standard Specification for Public Key Infrastructure Healthcare Model Certification Practices Statement
- Standard Specification for Privilege Management Infrastructure
- Standard Guide for Implementing Health Information Security Programs
- Standard Guide for Risk Assessment of Health Information Security
- Standard Specification to Support Long Term Non-repudiation

Electronic Signature

Service	Safeguard	Standard
Digital Signature	Ability to add attributes	S761 Electronic Sign ANSI X12.58, ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, FIPS PUB 196
	Continuity of signature capability	ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, ASTM E2085-00
	Countersignatures	ANSI X12.58, ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084, ASTM E2085
	Independent verifiability	ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, FIPS PUB 196 Entity Authentication Using PKI
	Interoperability	ABA Digital Signature Guide, ANSI X9.30-2, ANSI X9.31, ANSI X9.55, ANSI X9.57, ANSI X9.62, ASTM E2084-00, ASTM E2085-00, NIST SP800-15 MISPC
	Message integrity	ANSI X12.58, ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, ASTM E2085-00
	Multiple signatures	ANSI X12.58, ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, FIPS PUB 196 Entity Authentication Using PKI
	Non-repudiation	ANSI X12.58, ANSI X9.30-1, ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, ISO/IEC 10181-4
	Transportability	ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, ASTM E2085-00
	User authentication	ANSI X12.58, ANSI X9.30-2, ANSI X9.31, ASTM E1762-95, ASTM E2084-00, FIPS PUB 196 Entity Authentication Using PKI

Provided by Mike Davis, VA