Introduction

- What is HL7?
  - A standard to **exchange clinical data**
  - Widely known and used for interoperability between health IT systems

- What is the Arden Syntax?
  - A markup language used for representing and **sharing medical knowledge**

- So – what has HL7 to do with Arden?
What brings HL7 and Arden together?

„Arden Syntax“ for CDSS

- First Draft 1989 developed in the „Arden House“ – at that time independent from other standards
- Version 1.0 1992 published by ASTM (USA)
- 1998 the sponsorship moved to HL7 Inc.

„HL7 Arden Syntax Working Group“

- HL7 publishes and further develops the Arden Syntax as HL7 Standard
- Version 2.0 1999 approved by HL7 and ANSI
- Current Version 2.10

Arden Villa, Orange County, New York
What does HL7 mean?

„Health Level Seven“:
- „Health“: global interoperability standards for healthcare
- „Level Seven“ is a reference to the seventh layer of the ISO/OSI Reference Model

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1 - Physical
2 - Data Link
3 - Network
4 - Transport
5 - Session
6 - Presentation
7 - Application
```

Functional, Application oriented

Communication, transport oriented
HL7 Standards

- HL7 provides a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services, e.g.
  - Communication
  - Data Model, Data Types
  - Vocabulary
  - Clinical Documents
  - Decision support & knowledge management
  - Medical devices & personalized health devices
  - Disease management

- Well known Standards: V2 Messaging, CDA, FHIR
Health Level Seven

HL7 Standards Family

- Version 2.x
- Messaging
  - RIM
  - Data Types
- Version 3
  - Messaging
  - CDA
  - Structured Product Labelling
  - ...

- FHIR
  - Arden
    - Electronic Health Record-System Functional Model
  - other
    - Common terminology services
    - Vocabulary
    - ...

- Organisation "HL7 International"
  - Board of Directors
  - Members
  - Staff
  - Affiliates
  - Working Groups

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HL7 & Arden

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HL7 Standards

- **HL7-Standards**
  - Used globally, most important and implemented standard
  - Standards are developed by specific working groups with a defined consensus based harmonization process („ballots“)
  - Collaboration with other relevant SDO, (ISO TC21, CEN TC251, ASTM, DICOM, IEEE, IHE, IHTSDO, GS1,...)
  - Joint ISO-HL7 Standards

  - Basis for IHE
  - ELGA uses HL7

- **Intellectual Property**
  - Protected IP, owned by HL7 International
  - Standards are free available (registration needed without additional costs)
  - Members of HL7 may reproduce and distribute the standards and create customized constraints
Who is Health Level Seven International?

- A Standardization Organization. Domain: clinical and related administrative data
  - ANSI-accredited
  - Collaborates with other SDO: ISO, DICOM, IHE, ...

- Not-for-profit volunteer organization
  - Headquarter in Ann Arbor, Michigan, USA
  - Members: providers, vendors, payers, consultants, government groups, universities and other interested parties
  - A well-defined set of operating procedures ensures consensus, openness and balance of interest
  - >1.600 members worldwide
  - >35 national affiliates
HL7 Austria

- **Affiliate HL7 Austria** established 2007
  - Official Affiliate of Health Level Seven International
  - Organization as „private club“, not-for-profit
  - Fully financed by membership fees
  - „Open membership“: 89 members total

- **Activities**
  - Standardization, Ballots (CDA IG, HL7 V2 / Z-Seg, codelists, document nomenclature…)
  - Conceptual Work: OID, Terminology-Server
  - Annual Meetings (March 2-3 day)
  - Education: Workshops, Tutorials, eLearning
  - Conferences, e.g. IHIC2012 Vienna, pHealth2014 Vienna, IHIC2015 Prague, …
  - Interoperability Forum Meetings
Board

- **Chair** („Präsident“): Stefan Sabutsch
- **Vice-Chair**: Herlinde Toth
- **Treasurer**: Christoph Unfried
- **Vice-Treasurer**: Peter Schöttel
- **Secretary**: Peter Seifter
- **Vice-Secretary**: Barbara Franz
- **Chair of Technical Committee**: Alexander Mense
- **Chair TC FHIR**: Reinhard Egelkraut
HL7 Austria – the community

- **Meetings**
  - Annual Meeting (2-3 d) → 90-100 participants
  - Interoperabilitätsforum 3x p.a. with other SDO

- **Education**
  - HL7 Fundamentals (eLearning course with int. certificate)
  - ELGA CDA Implementation Guides
  - ARDEN Syntax Schulung (Workshop)
    - Cooperation with Medexter GmbH (last: 22 May)
  - FHIR Workshops (upcoming: eLearning)
  - Workshops on current issues (upcoming: Art-Decor 30.May)

- **Journals**
  - D-A-CH-L: HL7 Mitteilungen (printed, 2x p.a.)
  - HL7 International & Europe News
  - eMail-Newsletter
  - Twitter: [https://twitter.com/HL7_Austria](https://twitter.com/HL7_Austria)
International Standard Development

- HL7 Austria actively contributes to the international working groups
  - Collaboration with other Affiliates
  - Participation in Working Groups
    - Security (Co-Chair Alexander Mense)
    - Arden Syntax (Adlassnig)
    - Clinical Decision Support (Adlassnig)
    - FHIR (Egelkraut, Schuler, Krauss …)
    - ePharmacy
    - Etc.

- Arden Syntax – powered by Austrian Know How