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action:
write bmi |
return clas
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urgency: 90

ARDENSUITE

Medical knowledge representation
and rule-based inference software
with Arden Syntax

FOR I.S.H.MED

The ARDENSUITE clinical decision support (CDS) technology platform aims at providing clinicians and other medical personnel in your hospital with highly efficient medical-knowledge-based support in their daily decision-making processes. Its CDS is patient-specific, as it is based on a person's latest data. For quality management and study support, it can be extended to population-specific analyses.

UNIQUE AND VERSATILE SOLUTION

The ARDENSUITE technology platform is a highly innovative and unique CDS solution: It has been developed for clinical contexts and is thus specifically tailored to meet the requirements needed to support doctors and medical staff in their daily work. Its clinical knowledge components are written in Arden Syntax, an established medical knowledge representation and processing language that is an up-to-date HL7 International industry standard and approved by the American National Standards Institute (ANSI).

The software based on this standardized syntax is applicable in every medical discipline. Initially without specific clinical content, it represents a highly flexible and versatile platform, waiting to be applied to medical tasks or to solve specific clinical problems, when endowed with proper clinical knowledge.

INTEGRATION IN I.S.H.MED

Integrated in or connected with electronic medical record (EMR) systems like Cerner's i.s.h.med, Epic, Philips' ICCA, Dräger's ICM, or others, the ARDENSUITE accesses the system's medical data and applies rules or procedures to this data. The algorithms derive primarily from clinical expert knowledge or from collections of medical data. They are written in Arden Syntax and stored in medical logic modules (MLMs). In close cooperation with clinical experts, these MLMs are constantly being developed by Medexter's development team as well as on-site by hospitals using the ARDENSUITE as their development tool, meeting site-specific requirements.

FUZZY LOGIC FEATURE

A powerful feature of the ARDENSUITE is its possibility to additionally accommodate the high degree of uncertainty often found in real-life medicine. Due to the integration of fuzzy concepts, linguistic as well as propositional uncertainty can be taken into account. The implementation of fuzzy concepts is a globally unrivaled feature, as it allows to model human decision-making processes more closely to the circumstances of patient-care medicine than conventional CDS systems, which only allow simple yes/no outcome results.

REFERENCE INSTALLATIONS

At locations where our CDS solution is implemented, ARDENSUITES are integrated in or connected with the EMR systems and use structured data as input. In Austria’s largest University Hospital (about 2 100 beds) in Vienna, i.s.h.med runs as EMR system with the ARDENSUITE as integrated CDS solution. At the University of Colorado Health System, U.S.A., the ARDENSUITE has been integrated into Epic in several hospitals, and at the University Hospital Erlangen, Germany, the ARDENSUITE is connected with Dräger’s intensive care solution ICM.

ARDENSUITE FOR I.S.H.MED—IMPLEMENTATION

Medexter’s ARDENSUITE CDS solution includes implementation concepts in three areas:

1. The ARDENSUITE platform
2. MLM medical knowledge packages
3. Custom-built graphical user interfaces

1. THE ARDENSUITE PLATFORM

- applicable to a vast variety of clinical knowledge representation and processing tasks
- high flexibility, scalability, and integratability
- installed without specific clinical content

COMPONENTS

ARDENSUITE integrated development and test environment (IDE)

As simple and intuitive development environment, the ARDENSUITE IDE was specifically designed to meet your needs when writing and compiling MLMs in Arden Syntax.

The compiled modules can then be tested in the integrated test environment.

In combination with an ARDENSUITE server—a tool for practical MLM management—entire knowledge bases can be built and administrated.

ARDENSUITE server

With the ARDENSUITE server we are proud to present the key solution for MLM routine processing and—last but not least—stress-free MLM management.

Practical features such as user management, MLM management, and the implementation of standardized interfaces (e.g., REST, SOAP) contribute to a convenient and efficient knowledge base maintenance.

ARDENSUITE server connector

Our server connector serves as an add-on for the ARDENSUITE server and provides access to external databases from within an MLM (e.g., to SQL databases). With this tool, connections to various databases can be defined and stored directly in the ARDENSUITE server. Thus, the server connector provides practical access to all necessary data sources and the possibility to switch between them, facilitating the management of database connections significantly.

LICENSING AND PACKAGES

ARDENSUITE LICENSING OPTIONS			
Options available:		one-time fee	yearly fee
OPTION 1	License	✓	
	Maintenance		✓
OPTION 2	License and Maintenance		✓

Maintenance includes updates, upgrades, new releases, and innovation guarantee in both options.

We also offer site, enterprise, and campus licenses.

ARDENSUITE Package Deal

Our package deal includes 3 ARDENSUITE IDEs, 3 servers (for production, quality assurance, and development), and 3 server connectors.

ARDENSUITE Individual Packages

Please contact us with details on your hospital's size and requirements. We will prepare an individual offer.

CUSTOMER SERVICES

Medexter Healthcare provides ARDENSUITE user training and ARDENSUITE integration support.

2. MEDICAL LOGIC MODULES (MLMs)—MEDICAL KNOWLEDGE PACKAGES

- single MLMs or knowledge packages consisting of bundles of MLMs written in Arden Syntax
- applicable to various clinical situations

MLM OPTIONS

IN-HOUSE MLM DEVELOPMENT

Our ARDENSUITE IDE represents an excellent and easy-to-use tool for you to write and test MLMs. In-house MLM development may have the benefit of a close cooperation between your skilled hospital IT department and the clinical staff for whose patient care routine MLMs are written. This setup works excellently in many of our ARDENSUITE installations.

CUSTOMIZED MLM DEVELOPMENT BY MEDEXTER

Medexter's team of knowledge engineers works in close cooperation with experienced clinicians. We offer development of custom-built MLMs suited for your hospital's unique medical tasks and requirements with full support every step of the way.

READY-TO-USE MLM PACKAGES BY MEDEXTER

Application-ready MLM packages for various clinical tasks can be purchased individually. Please inquire for more information.

CUSTOMER SERVICES

Medexter Healthcare offers MLM authoring training as well as support by Medexter's research and development team.

3. GRAPHICAL USER INTERFACE (GUI) DEVELOPMENT—CUSTOM-BUILT USER INTERFACES IN I.S.H.MED

As the ARDENSUITE is a highly flexible CDS solution, there are several user interface options:

- Medexter offers to program user interfaces directly into i.s.h.med's GUI, closely tailored to suit your hospital's routine applications.
- Your i.s.h.med vendor and/or your hospital's IT staff may develop user interfaces for your ARDENSUITE CDS solution in-house.

CUSTOMER SERVICES

Medexter Healthcare provides interface development and design support.

CONTACT US

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By default, all customer services by Medexter such as user and authoring training, integration and MLM development support, and interface design support are provided by remote communication (skype or e-mail). Please inquire for in-house customer services and trainings.