

ARTHUR: a research project Emergency management

an original software solution



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Introduction

- Based on a  project started by



- With the collaboration of St. Luc, Chimay, Mont-Godinne Hospitals
- Now in collaboration with



Preliminary prototypes at St-Luc and Tivoli Hospitals

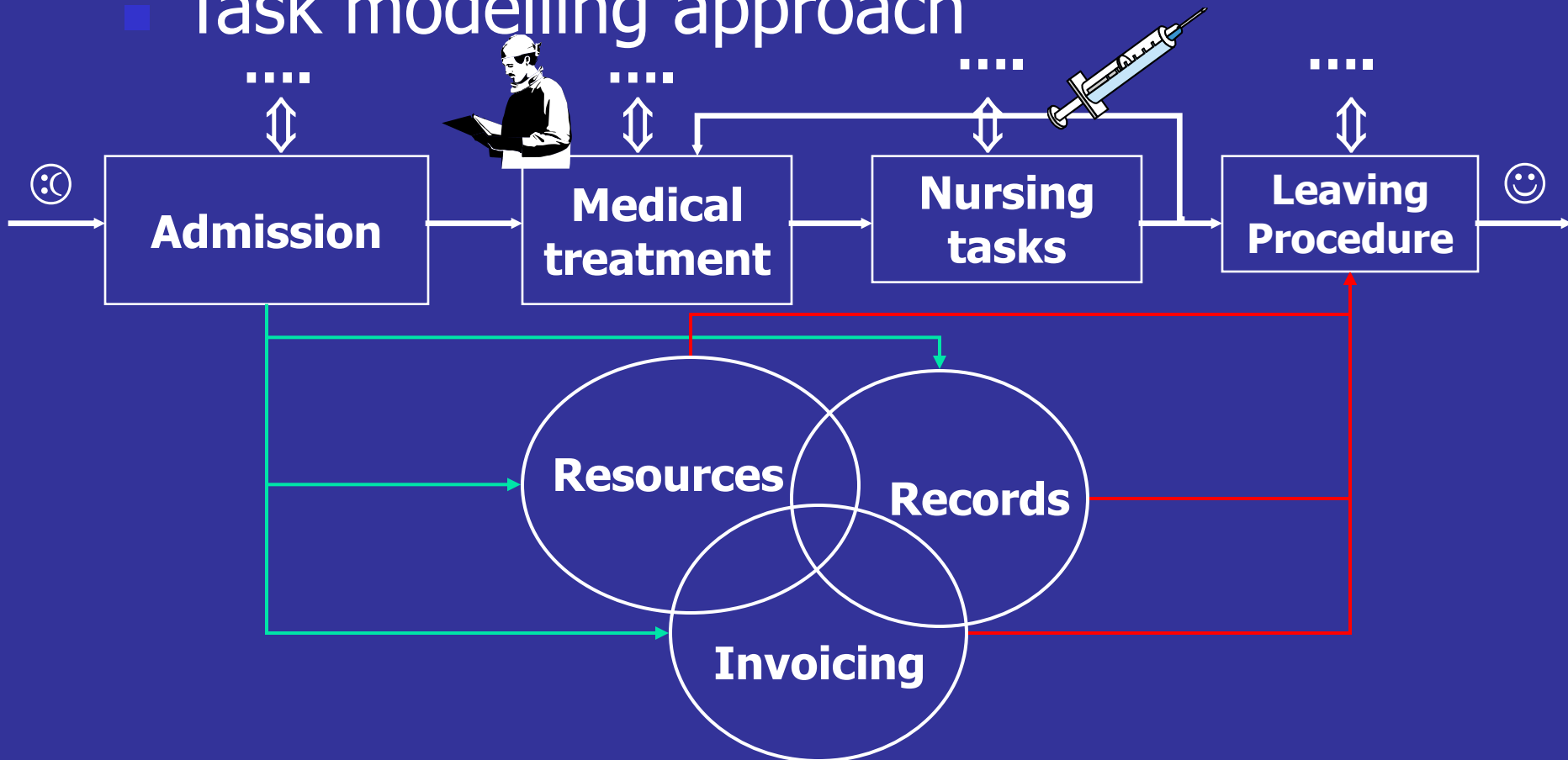
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Objectives

- EDA (Emergency Digital Assistant), organising the patients “take-care” activities within the Emergency Department
- Supporting the interactive tasks of the medical staff in a very compatible way
- Providing medical staff with a fast, reliable, secure system response (few screens)
- Displaying information structure that is adequate to the hospital staff task

Introduction

■ Task modelling approach



Structure

- 4 main sub-applications :

Emergency Mgmt



D Adm



D Pat



D Gest



Arthur Adm

Structure



■ Admission

Name	<input type="text"/>	Administration N°	<input type="text"/>
Firstname	<input type="text"/>	Emergency N°	<input type="text"/>
Sex	<input type="text"/>	Hospitalisation N°	<input type="text"/>
Birth Date	<input type="text"/>	Médical N°	<input type="text"/>
Naionality	<input type="text"/>		
Adress	<input type="text"/>		
Code postal	<input type="text"/>	S.I.S. N°	<input type="text"/>
Phone	<input type="text"/>	Mutuelle	<input type="text"/>
GSM	<input type="text"/>	affiliation N°	<input type="text"/>
N° Id Card	<input type="text"/>		
N° National	<input type="text"/>		

Help **▶▶** **Leave**

Structure



D Gest

- Legal matters : invoicing, complaints and litigations, statistics



Arthur Adm

- Access rights management
personalization of medical tasks
executors

Original ergonomics

- Observation of medical staff while accomplishing a task
- Task modelling
- Usability test





Original functionalities

- Multidevice multi-modal interfaces (e.g. speech recognition and finger tracking)
- Multi-language support
- Multidepartmental interoperability
- Pre defined terminology based on medical language as task shortcut to diagnostics
- Complete traceability of medical staff actions
- Portability

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Technologies

- Open Architecture based on standard:
 - HTML
 - XML Messaging Standards (KMEHR-bis, HL7)
 - XSLT to interoperate
 - XFORMS to synchronize across different multiple modalities and devices
 - LDAP (Lightweight Directory Access Protocol)
 - TCP/IP
- GEHR data model
- J2EE based Architecture



Conclusion

- The dream came « globally » true
- HCI were very classical
- No « big data » approach
- Empowerment of urgentists ?

PERSON TO CONTACT...

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