FILS - English Stream
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Licenta Project Themes

Nr.	Theme Description	Research(R)/ Industry(I)
	The following themes belongs to a larger one: Ontology-Based Approach to a Collaborative Process Definition. The heterogeneities of partners, the long-term relationships and establishing mutual trust between its partners are the ideal context for the creation of collaborative networks. The interoperability is the main way toward making possible collaborative, integrated networks. Three levels of interoperability exists: technological, semantic and organizational. How exchange process specifications is the most challenging topic in the semantic interoperability.	
1.	Ontology of Medical Care Processes This theme identifies Medical Care Process as a Collaborative Process and aims to study the semantic interoperability from an ontological point of view in the case of exchange of process descriptions between partners. http://www.m3pe.org/deliverables/process-ontology.pdf http://www.w3.org/Submission/OWL-S/ http://www.w3.org/Submission/2004/07/	R
2.	Exchange of Process Descriptions with XPDL and BPMN XPDL (XML Process Definition Language) is designed to exchange the process definition (BPMN), both the graphics and the semantics of a workflow business process. http://www.wfmc.org/xpdl.html http://is.tm.tue.nl/research/patterns/download/ce-xpdl.pdf http://www.enhydra.org/workflow/jawe/index.html	R
3.	Semantic Discovery: Discovering Complex Relationships in Semantic Web The intelligent discovery of Web Services is an important factor in automatic Web Services. Thus far, discovery methods have been heavily dependent on the input/output and the precondition/effect of a service and have not used ontology describing internal operations. Thus, users have much difficulty in finding the service that they want with the previous methods. In this project, a process-based ontology should be developed.	R
	The following themes aim to implement some important standards needed in the service infrastructure of collaborative networks. Implementation could use open source software products, already existent in the market.	
4.	Implementation of the ebXML Standard The OASIS eBusiness eXtensible Markup Language (ebXML) standard defines a language by which business systems may be configured to support execution of Business Collaborations consisting of Business Transactions. http://docs.oasis-open.org/ebxml-bp/2.0.4/OS/spec/ebxmlbp-v2.0.4-Spec-os-en.pdf	I
5.	Implementation of the Standard-Based Security and Privacy Services (SAML 2 and XACML) The Security Assertion Markup Language (SAML 2.0) OASIS Standard is an XML-based language for exchanging authentication and authorization data between security domains. The eXtensible Access Control Markup Language (XACML) OASIS Standard is an XML-based language for access control. http://www.oasis-open.org/committees/download.php/22553/sstc-saml-tech-overview-2 0-draft-13.pdf http://docs.oasis-open.org/xacml/access_control-xacml-2.0-saml_profile-spec-cd-02.pdf	I

	http://shibboleth.internet2.edu/docs/internet2-mace-shibboleth-arch-protocols-200509.pdf	
6.	Implementation of the OASIS's Web Service Notification Service with Camel and Glass Fish Application Server http://docs.oasis-open.org/wsn/wsn-ws_base_notification-1.3-spec-os.htm http://docs.oasis-open.org/wsn/wsn-ws_brokered_notification-1.3-spec-os.htm	I
7.	Implementing Process-Based Web Services with Netbeans Editor and Engine (BPML) http://wiki.netbeans.org/ACompleteSOAAppNetbeans5.5 http://www.dis.uniroma1.it/~degiacom/papers/2005/bera-calv-degi-mece-WSS-2005.pdf http://www.netbeans.org/kb/55/bpel_gsg_wsdl.html	I
Miscellaneous		
8.*	Implementation of the citizen's Virtual Clinical Record (2-3 students) Virtual Clinical Record (VCR) is an infrastructure of e-services implementing a region-wide virtual longitudinal. Its primary objective is to support information sharing among professionals cooperating in the integrated care of citizens and become the main resource for other business activities related to the secondary use of routine clinical information (e.g. administration and governance of healthcare organization, epidemiology, public health). For this the VCR system interconnects at application level the electronic health information systems and EHRs (Electronic Healthcare Record) in use in a wide region or country.	I + R
9.*	Enterprise intranet messaging and document handling solution Implement an instant messaging solution for a medium sized enterprise using XMPP. The system has the following requirements: -be able to send and receive files -encrypt all communication outside the intranet -authenticate users using a directory, XMPP server should communicate with the directory using LDAP.	I
10.*	Personal Health Record adaptor Adapt a legacy Point Of Service application in use for health providers to be able to share date with a Google Health personal health record.	I
11.*	Website optimizer Scans a remote website for broken links, builds HTML and XML sitemaps, gives hints for optimizing the visibility of the site to search engines.	I

*) Themes proposed in collaboration with Prof. Assist. Andrei Vasilateanu