Collaborative Networks and BI

Cristóvão Sousa
cristovao.sousa@inesctec.pt
Center for Enterprise Systems Engineering - INESC TEC

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# CESE: colNET research area goals

<table>
<thead>
<tr>
<th>decision support in collaborative networks</th>
<th>collaborative networking strategies</th>
<th>information &amp; knowledge management in CN</th>
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<tbody>
<tr>
<td>to research new concepts for the design of collaborative spaces for collaborative decision making involving complex information and sense making</td>
<td>to research new concepts and methods for the management of collaborative networks</td>
<td>to research new concepts, models, methods and tools for the information and knowledge management in collaborative networks</td>
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<td>to explain current decisions and decision-making processes within collaborative networks and characterise future ones</td>
<td>to explain current processes of collaborative networks formation and to characterise future ones</td>
<td>to explain information behavior and knowledge representation processes in collaborative networks</td>
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<td>to help collaborative networks participants to design collaborative decision-making processes that use and make-sense of complex information</td>
<td>to help the transformation of star networks and chains in collaborative networks and to improve its collaborative processes</td>
<td>to help collaborative networks to develop and implement information and knowledge management strategies</td>
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**Design science research**

**Explanatory research**

**Consultancy**
knowledge representation, while technical activity, deals with designed, pragmatic and socially constructed artifacts whose validity and value is time, context and situation dependent.

There are evidences from several application areas e.g., domain engineering, of the difficulty in the collaborative production and use of conceptual representations as pervasive as it can be in everyday technical activities, the collaborative construction of conceptual representations has not received enough attention in research and in practice.

How to evaluate (measure?) the adequacy of a knowledge representation artifact (conceptual representation) for a given application (set of goals)?

What is the influence of the inter-organizational relationships on a knowledge organization and collaboration system (social network -> semantic network)?

How to mix social interaction with ontology merging/integration techniques to achieve an efficient conceptual negotiation process?
CESE: colNET projects

Current projects
• BestCase: WP2 Collaboration and knowledge management in collaborative networks — CCDR-N, ON2 — 2012-2015
• Innovation Dynamics in Aeronautics and Embraer in Évora: Towards a Distributed Platform for Entrepreneurial Initiatives, New Employment and Skills Development

Past projects
• H-Know - Advanced Infrastructure for Knowledge Based Services for Buildings Restoring — EU FP7 — 2007-2010
• cogniNet - Cognitive Semantics for Collaborative Networks — FCT — 2008-2012
• pmColNet - Performance Management in Collaborative Networks — FCT — 2006-2010
• Know-Construct - Internet Platform for Community Knowledge Management in the Construction Industry — EU FP7 — 2004-2006
• RCED - Redes Colaborativas de Elevado Desempenho (High Performance Collaborative Networks) — ON2 — 2007
CESE: colINET products

www.conceptme.pt
CESE: colNET recent publications


CESE: Business Intelligence & Analytics

• R&D in BI&A for Enterprise Systems
• technology
  – business intelligence
  – data mining
    • clustering, recommender systems, classification, regression
• data
  – transactional data
  – RFID
  – (mobile) sensor data
CESE: Business Intelligence & Analytics - applications

• manufacturing
  – machine sensor-based
    • predictive maintenance
    • production management
    • quality management
  – model management
    • very large number of models
  – store management
    • RFID-based
    • BI
    • customer segmentation and
    • recommender systems
  – layout

• university management @ U.Porto
  – BI system to support higher management
  – BA to understand student success
CESE: Business Intelligence & Analytics

- People
  - Carlos Soares, Hugo Ferreira, Ana Barros, Patrícia Ramos, Rui Rebelo, Luís Guardão, Pedro Ribeiro, Pedro Abreu, Catarina Félix, Pedro Strecht, Luís Cruz, Mohammad Nozari, Artur Aiguzhinov, Ana Isabel Marques, ...
  - ... and João Moreira (LIAAD), Alípio Jorge (LIAAD), Rui Maranhão (HASLab), Ricardo Morla (UTM), Ana Fernandes (LIAAD) ...
Contacts

• António Lucas Soares
  – als@fe.up.pt

• Carlos Soares
  – csoares@fe.up.pt

• Cristóvão Sousa
  – cristovao.sousa@inesctec.pt