

Making Complex Scientific Phenomena available to Everyone: About the similarities between LOIS and the COLDEX project

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Abstract:

COLDEX, which stands for "Collaborative Learning and Distributed Experimentation," is a EU (European Union) funded research project aimed at developing a variety of learning environment that takes advantage of recent learning theory and technological advances. COLDEX is a collaborative effort between 8 different universities in Sweden, Germany, Portugal, Spain and Chile and a couple of Science Centers. This project aims at developing and using new IT (information technologies) approaches and computational tools to foster scientific experimentation, modeling and simulation in distributed and collaborative settings in an inter-cultural community of learners. Examples of the experiential phenomena to be studied are among others: astronomy, seismic phenomena and environmental issues. Our efforts will result in the creation of innovative pedagogical scenarios to address these issues.

The scientific and engineering approaches used to discover and explore these phenomena will consider the following aspects:

- a) Generation and provision of source data
- b) Construction of realities using advanced visualization techniques
- c) Concrete modeling & design:
- d) Innovative design of on-line Collaboration Environments

The LOIS project, developed completely independently of our research, confirms our view with regard to the importance of exploring new ways to visualize and to make complex scientific data accessible to the public. In this presentation, I will briefly describe the COLDEX project and some of our on-going research activities. Moreover, I will conclude by making an attempt to explore in which ways the LOIS and the COLDEX project can benefit from each other based on their unique scientific, technical and societal features.