CASL Computational Science Seminar

Title: Large Scale Relational Information Visualisation Methods

Speaker: Dr. Aaron Quigley (UCD)

Date: Tue 27th November 2007 at 2:00PM

Location: CASL Seminar Room – Belfield Office Park

Abstract: Societies continued reliance on information and communications technologies has resulted in organizations generating, gathering, and storing "raw data" at a rate growing each year. The ability for even a mid-sized organization to store tens to hundreds of terabytes of data is within reach. Massive storage technologies are rapidly outstripping our ability to effectively analyse, explore, and understand such voluminous data. While research in other fields such as data mining, machine learning and knowledge management are also attempting to aid in the analysis of such voluminous data, there is a realisation that the "human-in-the-loop" affords a visual analysis not possible through automation alone. Of particular interest here is the study of large relational data sets that people in domains such as social science, biochemical engineering, software development and financial modeling attempt to study, understand and reason about. The visualisation of large relational data sets is often studied as a class of graph drawing problem.

Graph drawing as a field of research blends theory and application through the evolving needs of industry or new ideas from academia. While the field is very broad, the amount of research addressing purely large-scale drawing and interaction techniques is limited. In this talk we will consider scaleable drawing methods based on graph

clustering approaches, grid decomposition, high order embeddings, stratified layouts or geometric space partitioning.

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