THE UNIVERSITY　　　　**OF HONG KONG**

Department of Mathematics

Operations Research Group Seminar (ORG)

October 24, 2002 (Thursday)
4:00 pm
517 Meng Wah Complex, HKU

3:30pm – 4:00pm　　Cookies & Tea Time

From Path Tree To Frequent Patterns:
A Framework for Mining Frequent Patterns

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Abstract

In this talk, we present a new framework for mining frequent patterns from large transactional databases. The core of the framework is of a novel coded prefix-path tree with two representations, namely, a memory-based prefix-path tree and a disk-based prefix-path tree. The disk-based prefix-path tree is simple in its data structure yet rich in information contained, and is small in size. The memory-based prefix-path tree is simple and compact. Upon the memory-based prefix-path tree, a new depth-first frequent pattern discovery algorithm, called PP-Mine, is proposed that outperforms FP-growth significantly. The memory-based prefix-path tree can be stored on disk using a disk-based prefix-path tree with assistance of the new coding scheme. We present efficient loading algorithms to load the minimal required disk-based prefix-path tree into main memory. Our technique is to push constraints into the loading process.

All are welcome

For further information, please contact org@maths.hku.hk *or visit*
http://hkumath.hku.hk/~org