

An Indian-Australian research partnership

Project Title: **Mobile P2P Infrastructure for Location Specific Services**

Project Number IMURA0201

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Research Academy Themes:

Highlight which of the Academy's Theme(s) this project will address? 1.

(Feel free to nominate more than one. For more information, see www.iitbmonash.org)

1. Advanced computational engineering, simulation and manufacture
2. Infrastructure Engineering

The research problem

Define the problem

With the proliferation of mobile devices, there exists an opportunity to create adhoc networks to solve problems cooperatively. A particular problem of interest is one where a set of spatio-temporal queries themselves collectively forms a spatial DB that is distributed on a mobile P2P network. The network is fluid in that nodes join and leave this network at random points in time that necessitates dynamic replication of data – a node leaving a network will also invalidate the set of queries issued by that node. We need to set up incentives for the nodes to carry data pertaining to queries even though they may not participate in the query process themselves. The goal is to answer the query as quickly as possible.

Project aims

Define the aims of the project

The goal of the project is to build the theory AND the systems infrastructure to build suitable applications.