

THE APPLICATION OF THE GRID COMPUTING TECHNOLOGY IN THE INTELLIGENT TRANSPORT SYSTEMS

Summary

Intelligent Transport Systems (ITS) mean applying Information and Communication Technologies (ICT) to transport. These applications are being developed for different transport modes (road, rail, air, water) and for interaction between them. ITS can create clear benefits in terms of transport efficiency, sustainability, safety and security.

The potential of ICTs to improve energy efficiency is generally accepted. Above all now, mobilising ICT to facilitate the transition to an energy-efficient, low-carbon economy in ITS is important challenge. For example, ICTs can enable energy efficiency improvements by reducing the amount of energy required to deliver a given service by delivering innovative technologies, e.g. emerging solution in computing such as grid computing.

Grid computing is defined as the virtualization and pooling of information technology (IT) resources, such as compute power, storage, and network capacity, into a single set of shared services that can be distributed and redistributed as needed. Just as an electric utility can accommodate wide variations in power demands, grid computing provides a level of control and adaptability for IT resources, that enables an agile response to changing computing workloads while being transparent to end users.

This paper analyses the role of grid computing technology in ITS in road transport towards environmental protection, traffic management and transport safety improvement.

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