Delayed Dictionary Compression

RAMOT at Tel Aviv University Ltd.
From Israel
Innovative Products and Technologies

Summary of the technology

Data compression is a preferred solution, since there is no need to dig in the ground for many kilometers in order to build new high bandwidth links.

The Delayed Dictionary Compression (DDC) family of algorithms was invented by Prof. Yossi Matias and Mr. Raanan Refua. The motivation was to release the bottleneck of low level infrastructures - data transfer links.

Current data compression techniques for packet networks allow a good compression and a poor latency, or poor compression ratio and a good latency.

Project ID : 4-2012-319

Details of the Technology Offer

The Invention

A family of compression algorithms for data transmission that allows a high compression ratio and also a very good latency.

Background

The world wide explosion of usage in smart phones and tablets causes a severe burden on cellular infrastructures. Cellular operators are seeking desperately for bandwidth enhancement solutions. For example, in India alone, every month 7 million new people are joining cellular networks.

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The Need

Current data compression techniques for packet networks allow a good compression and a poor latency, or poor compression ratio and a good latency.

Advantages

Much more data can be transferred over communication links, with a small delay (possibly zero if so desired). The result is better application behavior for the end user.

Since DDC is a general method, it is suitable for the compression of many types of data. In particular it is perfect for cellular data compression, voice compression and others.

Another benefit of DDC is saving battery life for mobile phones, since transmitting/receiving compressed data requires much less energy than uncompressed data. This is critical for the mobile industry.

Patent

US granted patent 7,630,394

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Technology Transfer Office from *Israel*

Related Keywords

Computer Hardware, Computer Software Technology, Internet Technologies/Communication (Wireless, Wi-Fi, Bluetooth), Telecommunications, Networking, Audiovisual Equipment and Communication, Mobile Communications, SatelliteTechnology/Systems/Positioning/Communication in GPS - Global Positioning System, Communications Protocols, Interoperability, Data Communications, Data communication components, Communications processors/network management, Satellite Microwave Communications, Computers, Communications/networking, ICT and Media, computer sciences

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