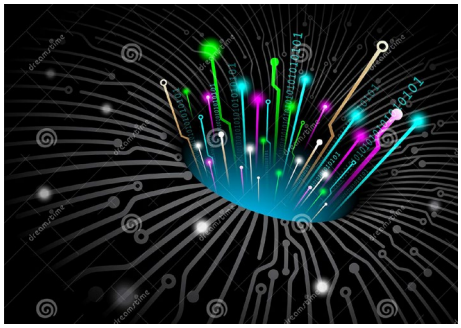
UNIVERSITY OF WATERLOO

TECHNOLOGY SUMMARY

Efficient Data Transfer Software



Background

The wireless data communication market is projected to grow from USD 794.6 million in 2018 to USD 96.6 billion by 2023, at a CAGR of 18.6%. The growing penetration of cellular systems and increasing demand of wireless data services for exchanging information across the globe are the major factors driving the global wireless data communication market.

Wireless data transmission has great demand in the consumer electronics industry. For example, laptops, tablets, smartphones, and other devices. This technology is rapidly being implemented in other industries such as defence and healthcare.

Description of the invention

Waterloo's Efficient Data Transfer Software offers a novel methodology to generate and decode information through wireless or wired signal transmission. The approach uses proprietary technology to tightly pack bits of information at various points of time and frequency, which can be inverted into a signal, transmitted, and ultimately decoded to recover the original information array.

Current applications, such as wireless telecommunications as well as Bluetooth and Zigbee peer-to-peer connections, rely on digital signal receivers to decode wireless transmissions. Waterloo's innovation provides an alternative approach which can improve the bit rate, security, and fidelity of signal transmission. This technology is disruptive and can be used in many applications.

Advantages

- High information density of signal transmission
- High bit rate of signal transmission
- Bespoke encoder/decoder designs promote secure transmission

Potential applications

- Telecommunications, radar, and military industries.
- Peer-to-peer data transmission.
- Internet-of-things.

Reference

10178

Patent status

US and Canada patents filed

Stage of development

Prototype developed, looking for industry partners to validate results.

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