CApacity Utilization in cellular networks of present and future generaTION

Results in Brief

Preventing cellular mobile network overload

During catastrophic events like earthquakes, cellular telephone networks have experienced traffic overload, and subsequently, network failure. In response to this, the CAUTION platform was designed to bridge telephone networks for mission critical users, thus facilitating efficient and successfully coordinated telecommunications between all parties.

DIGITAL ECONOMY

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Cellular networks need to be able to cope with current and future traffic congestion with minimal risk of failure. To this effect CAUTION utilised existing resource management techniques and introduced new ones, such that all the techniques used would be more efficiently applied. Thus the combined aims of the project led to the provision of an enhanced quality of service.

Besides the several existing techniques, the four new interconnected network elements are Interface Traffic Monitoring Unit (ITMU), Resource Management Unit (RMU), Emergency Call Server (ECS) and Priority Call Server (PCS). In addition to the four new techniques, the Traffic Generator Project (TGP) has been able to simulate traffic for cellular networks, and has proven to be archetypal. Therefore should the worst-case scenario occur, which could lead to an unparalleled demand

on the communication networks infrastructure, the CAUTION platform would be able to cope.

CAUTION symbolizes the consortium's mission for Capacity Utilisation in cellular networks of present and future generaTION. It has also realised the European Commission's expectations, because it is able to deliver enhanced social conditions and reduced costs for European citizens. This is enabled through: the guarantee of service, the reduced cost of mobile services, enhanced quality of service, promotion of service access, improved safety, subscriber satisfaction and improved employment prospects for EU citizens.

The platform is still in its prototype form, but has been tested in the laboratory and in action, and the results have shown remarkable dissemination activities. So far, the concept has proven that it can provide enhanced levels of functionality and advanced mobile communication monitoring technology; thus elevating it to pole position as a future market leader. With additional enhancements for next generation network requirements, further test are due to take place prior to commercial product launch.

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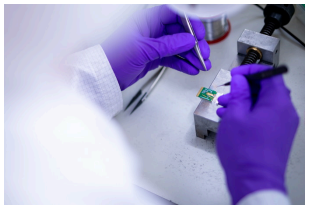

Cost-effective, optical system-on-chip technology to satisfy ever-growing bandwidth demand

Pioneering integration of connectivity advances automated driving

Design of network control algorithms to keep pace with developments

Project Information

CAUTION

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Project website

Project closed

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