

Innovative Research Solutions with Industry

Information & Communication Technologies

CLIENT:

Openet

AREA:

Mobile networks



Facilitating more effective mobile operating systems via development of new product



Openet delivers transactional intelligence to the world's largest telecommunication service providers. The company's solutions enable its customer base to extract the maximum value from activity on their networks.

This is achieved by gaining visibility into the usage of network services, deploying new business models to grow revenues and profitability, controlling access to and allocation of network resources and enabling end-user service personalisation.

ChattyApps is a commercial project undertaken to address the issue of signalling overload in modern mobile networks, which has been introduced by the proliferation of smartphone devices and their need to be constantly connected. ChattyApps attempts to reduce the resource demand on the Radio Access Network by only allowing full bearer services to Applications running in the foreground.

Modern mobile operating systems manage the lifecycle of applications in order to conserve resources on the device. Once a user finishes interacting with an App, it is often shifted into background mode, where the App relinquishes the User Interface of the device, but is still able to perform tasks such as networking. Many Apps rely on In-App advertising to generate revenue and constantly poll back end advert servers to check for new ads to display. They do so when they are



Announcement of the Innovation Partnership between Openet & AIT

interacting with the user and also when they are in background mode. This requires the setting up and tearing down of TCP sessions on an ongoing basis between the device and back end server, which in turn causes a signalling load in the SS7 network of the mobile operator. →

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•→ The Software Research Institute at Athlone Institute of Technology conducts applied research in digital media communications and applications and network and infrastructure management. With the support of Enterprise Ireland Innovation Partnership funding, it began to work jointly with Openet on the project ChattyApps which aimed to alleviate this problem.

The approach taken in this project is to deploy agent software on the Android OS that mediates the data flows between the device and back end servers. Background data is permitted in certain cases for “whitelisted” Apps, but in general data generated from background Apps is blocked. The software Agent is controlled via policies set up on a backend server, to which the Agent connects periodically.

The Agent also collects statistics from the device relating to network communications and forwards these on to the server for analysis and display.

As a result of this successful research partnership, a commercial product was produced which will generate a large return on investment for mobile operators, expand the product range of the company and increase its revenue stream and profitability. ■

TESTIMONIAL

Joe Hogan

CTO and Founder,
Openet

“The objectives of the research project in delivering a first to market and innovative commercial product is a real life output of what an Innovation Partnership should deliver.”



Dr. Brian Lee

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