

LIVEWARE (LTE – WiFi Aggregation)



Eight Bells Ltd.

Website: <http://8bellsresearch.com/>

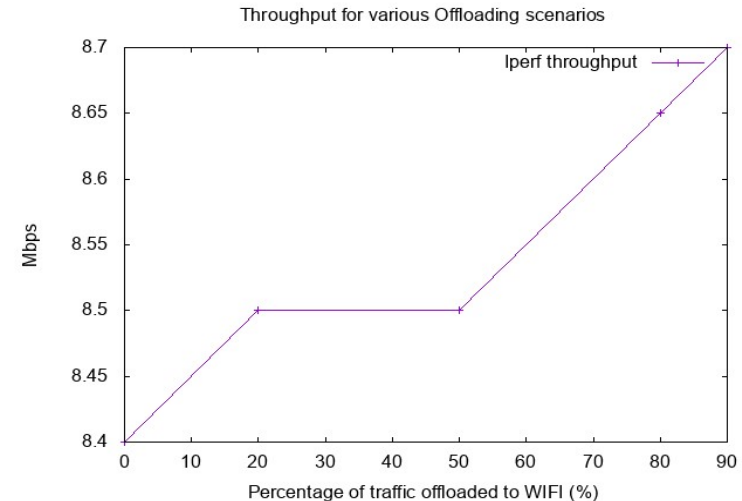
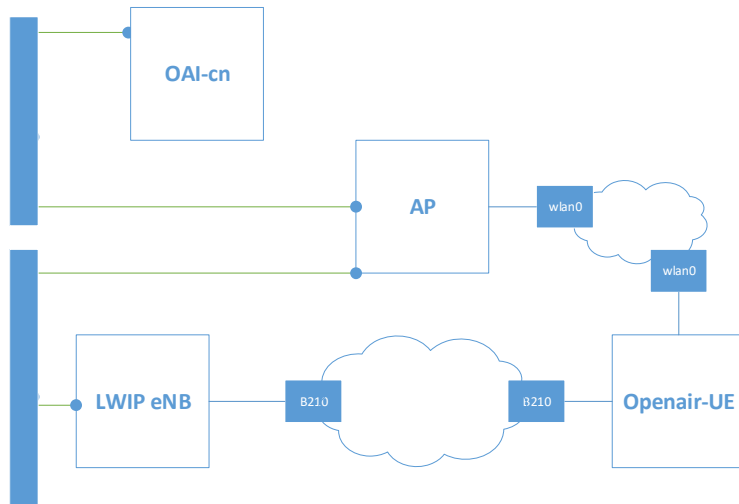
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Goals and Description of Setup

- **Goals:** LTE technologies for unlicensed spectrum receive increased attention and gain momentum among the wireless community of operators, regulatory bodies and industry fora. LIVEWARE leverages the flexibility offered by WiSHFUL platform to conduct experiments that measure the benefits of LTE-WiFi integration both in terms of performance and network robustness.
- **Main Challenge:** LIVEWARE follows the LWIP approach and builds upon the standardized procedure for steering downlink data traffic from LTE to WiFi Access Point (AP). LIVEWARE conducts experiments that measure the benefits of LWIP LTE technology for using unlicensed spectrum both in terms of performance and network robustness. This will help a lot to develop new business models, according to the plan of the company. For this to come into effect, the WiSHFUL platform is crucial for supporting the proposed tests and for addressing the important experimentation challenges.
- **Description of the Setup:** LIVEWARE experiments deploys four nodes to completely establish a LTE network and WIFI infrastructure. A dedicated EPC and WiFi hotspot was deployed by utilizing state of the art open source solutions such as OpenAIR-cn and hostapd. In parallel, a dedicated eNB implementing LWIP solution on top of standard OAI eNB was also provided.

Conclusions and Feedback



Conclusions: The benefits of WiFi and LTE aggregation in providing higher performance and throughput to end users has been studied. Overall, for big percentages of the offloaded traffic to WiFi, an increase of over 5% is observed.

Feedback: Setup of Wishful project allowed 8Bells to easily get involved with the project and have access to all required resources in a short timeframe. Support from Wishful personnel was critical in the deployment and execution of the experiment. Thanks to the software tools and hardware provided to us by WiSHFUL, we were able to better understand the capabilities and flexibility of federated testbed and get ideas for future products/experiments.