

SCMA with Grant-Free Transmissions demo

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HUAWEI

COBHAM



UNIVERSITY OF
SURREY



5G will enhance existing and expand to new use cases



SCMA Based Grant Free **focus mainly on the 2nd and 3rd scenarios**

What is Sparse Code Multiple Access (SCMA)

A Novel Code Domain Non-orthogonal Multiple Access

SCMA

=

Non-orthogonal sparse spreading

+

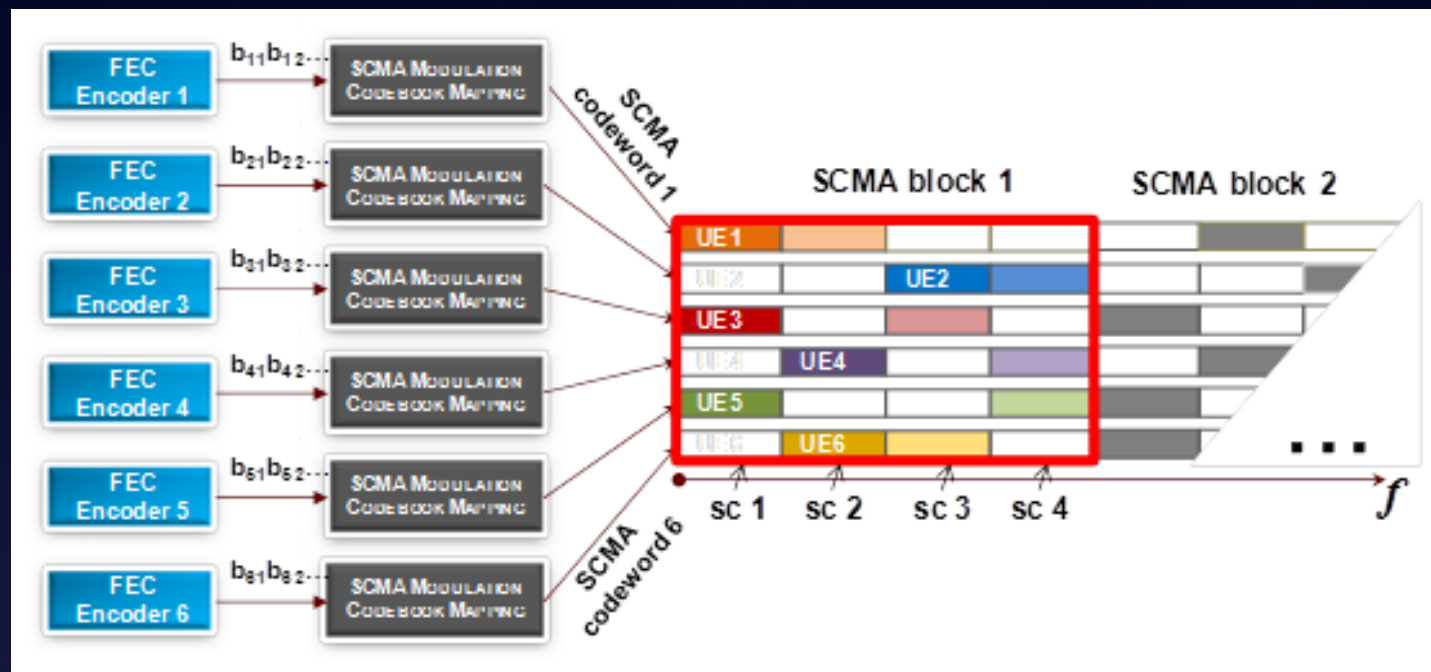
Code domain superposition

+

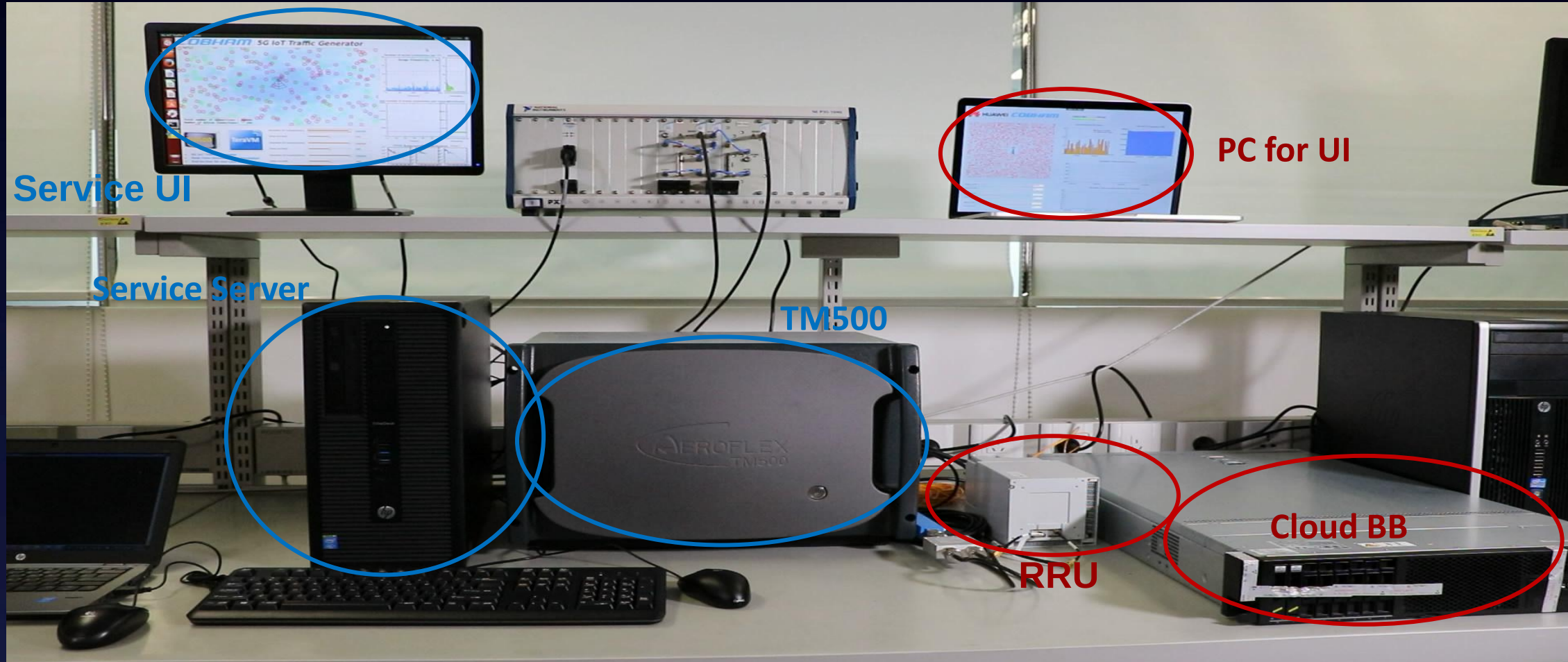
Multi-dimensional modulation



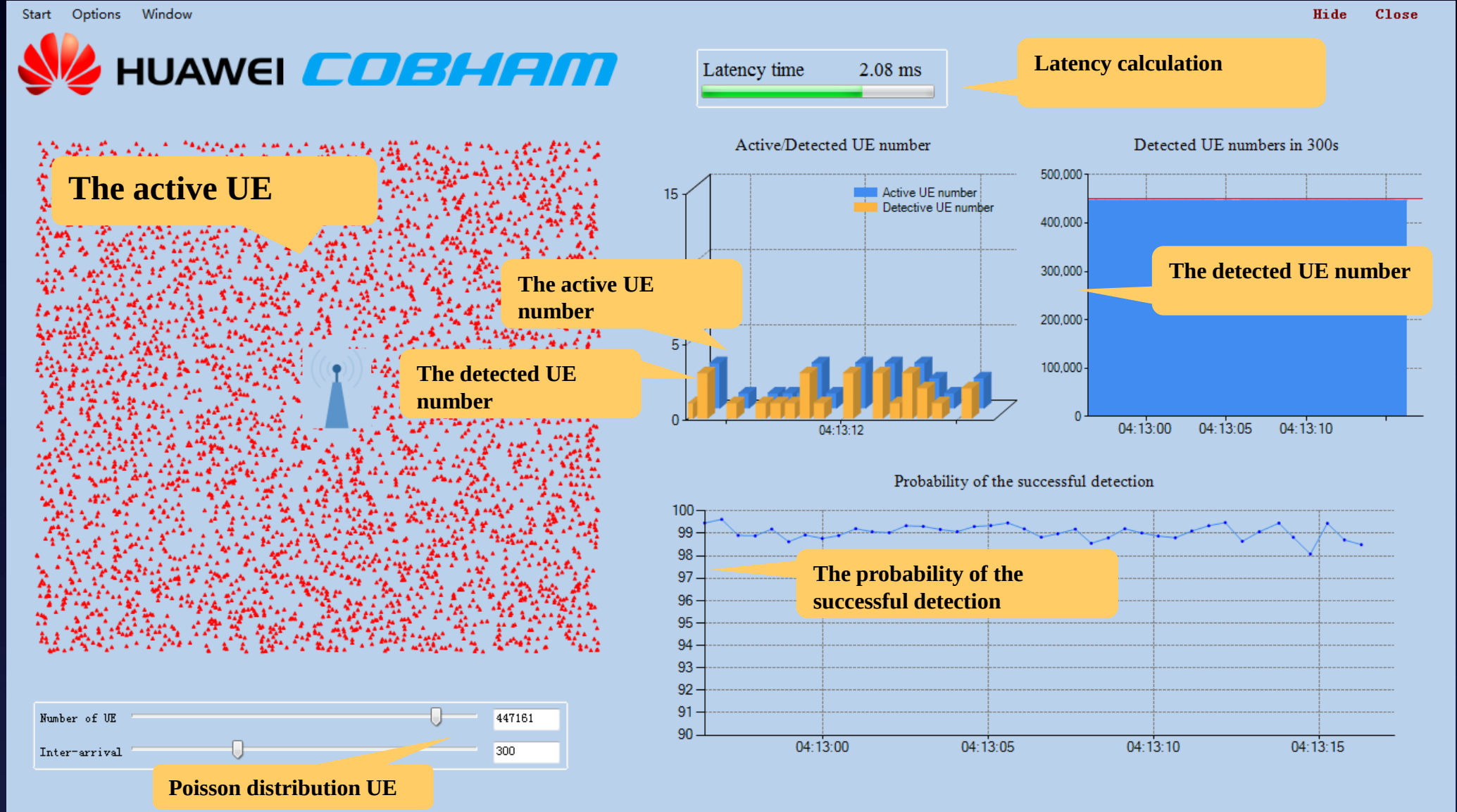
- ❖ Better spectrum efficiency
- ❖ Lower detection complexity
- ❖ Lower PAPR



SCMA Grant free Prototype Hardware



SCMA Grant free demo



THANK YOU

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