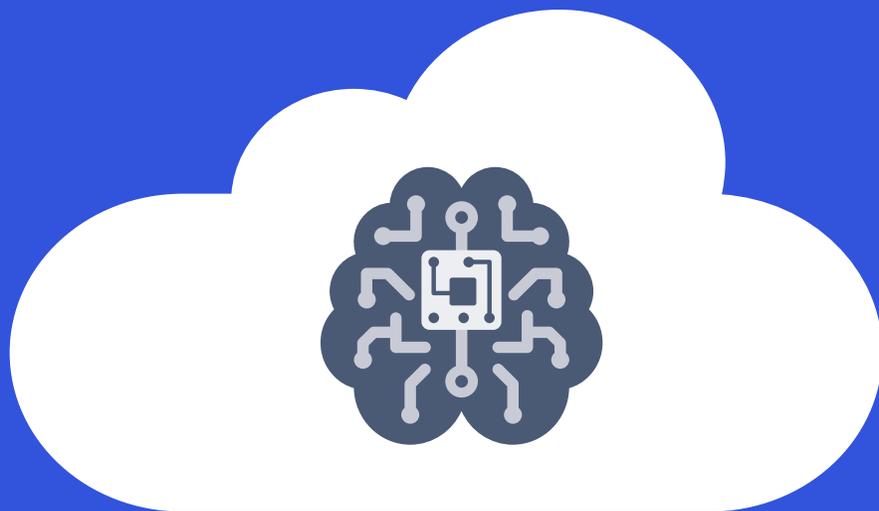


5G at the Edge in IoT

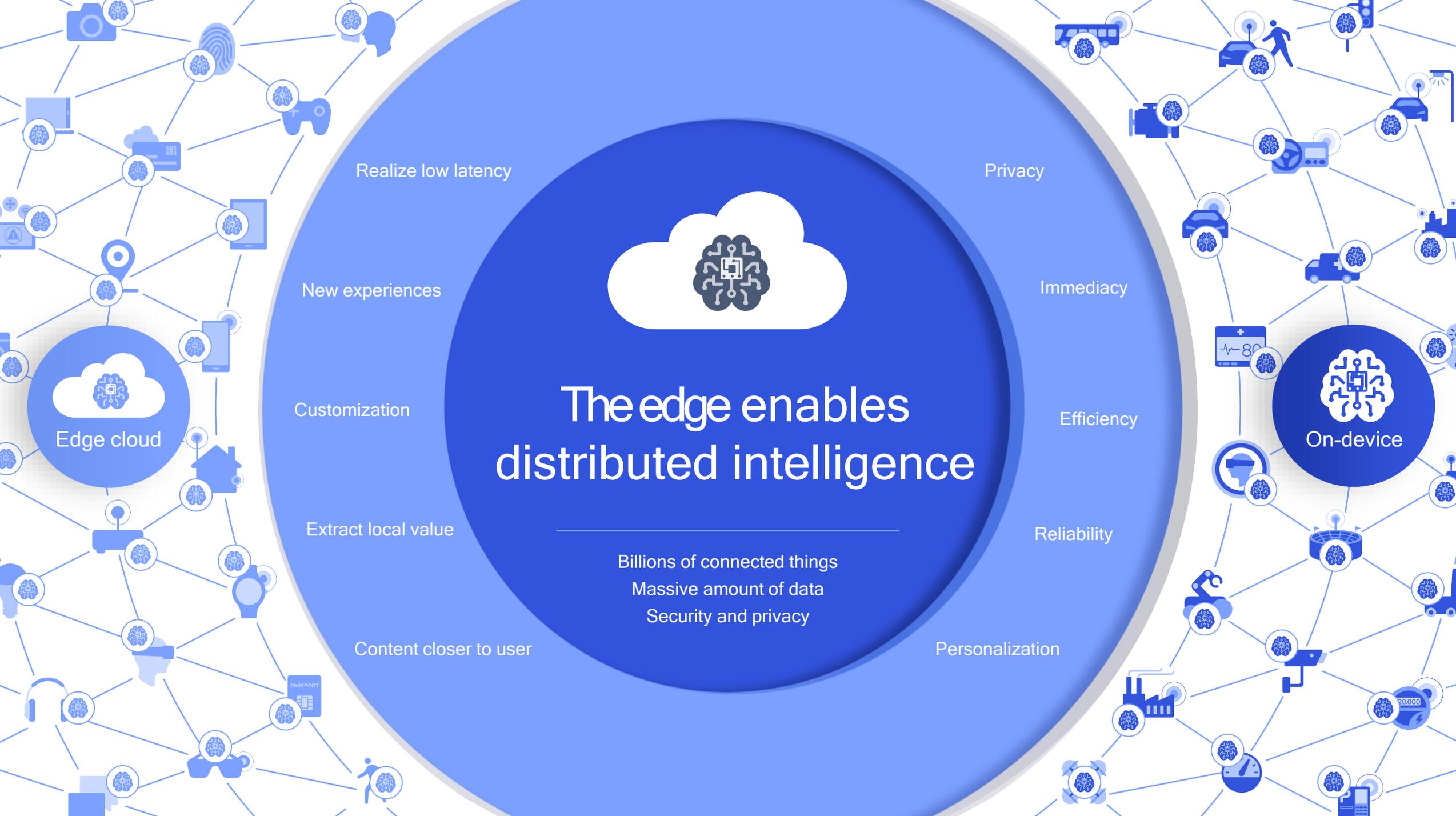
Dr. Yongbin Wei

Senior Director, Engineering
Qualcomm Technologies, Inc.





Today,
intelligence is primarily associated with the cloud



The edge enables distributed intelligence

Billions of connected things
Massive amount of data
Security and privacy

Realize low latency

Privacy

New experiences

Immediacy

Customization

Efficiency

Extract local value

Reliability

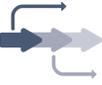
Content closer to user

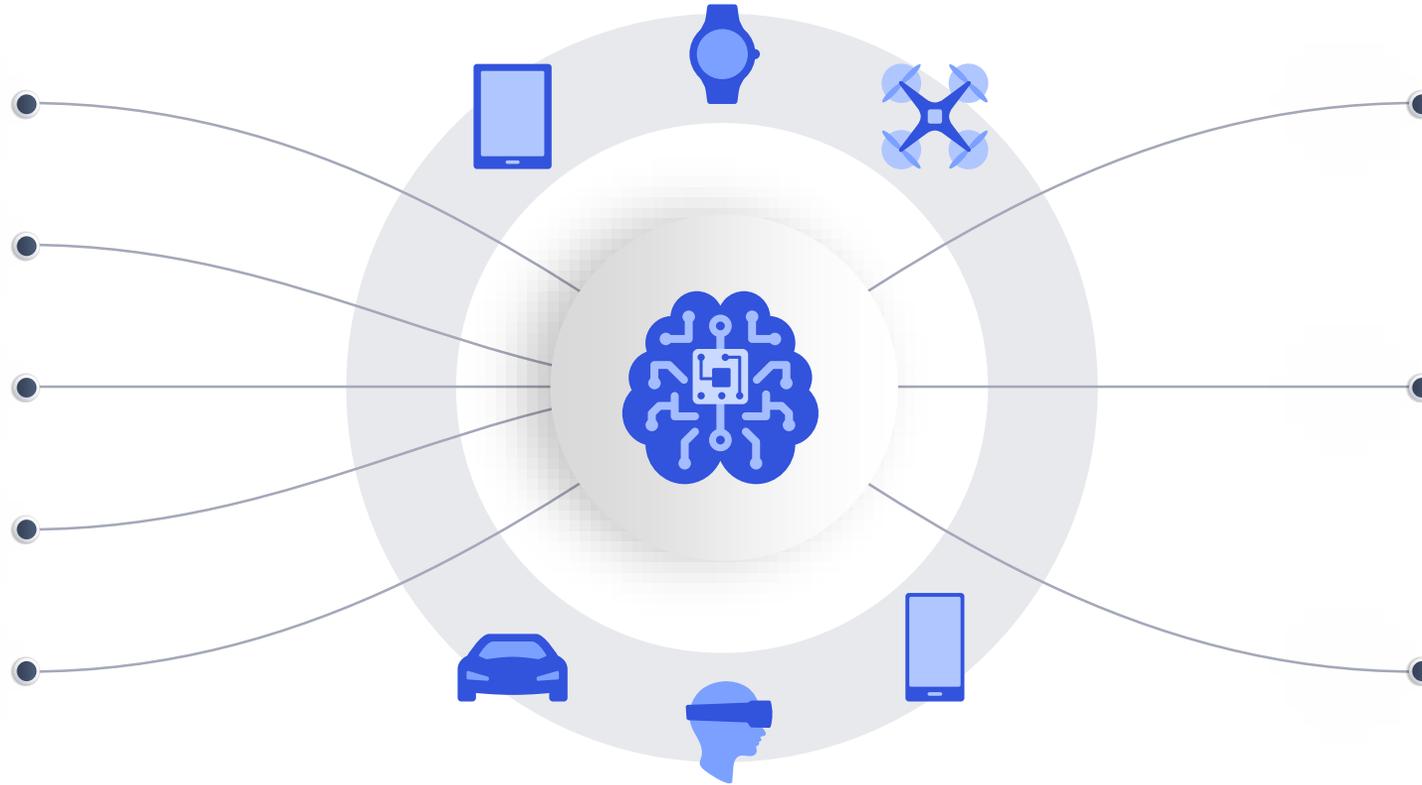
Personalization

Edge cloud

On-device

The challenge of AI workloads

-  Compute intensive
-  Large, complicated models
-  Complex concurrencies
-  Real-time
-  Always-on



Constrained edge environment

Thermally efficient for small form factors



Requires long battery life



Storage/memory bandwidth limitations

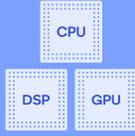


Unique requirements for IoT devices

Technology improvements are enabling the IoT edge to grow rapidly



Sensing



Processing



On-device AI



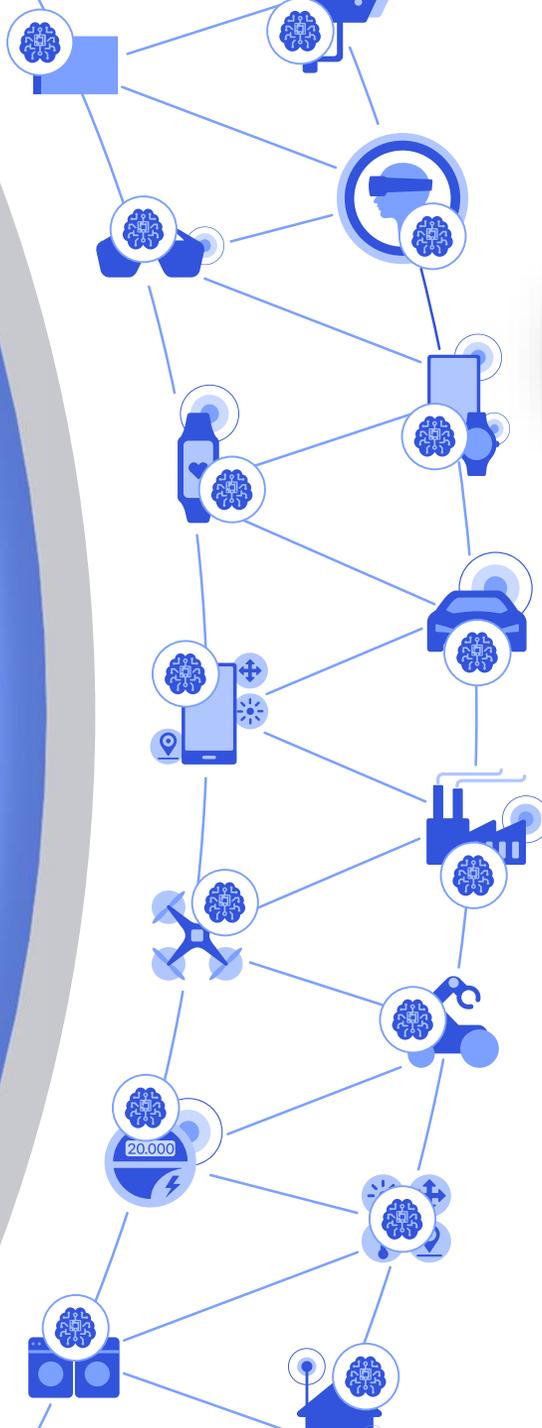
Connectivity



Security

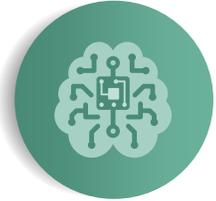


Edge services



Perceive

Hear, see, monitor, and observe



Reason

Learn, infer context, and anticipate



Act

Act intuitively, interact naturally, and protect privacy

A unifying connectivity fabric for society

Like electricity, you will just expect it everywhere



Scalable to extreme simplicity

Multi-gigabit speed

Ultra-low latency

Virtually unlimited capacity

Extreme reliability

On-device intelligence



Enabling the IoT at the edge with 5G

- Essential on-device capabilities augmented with processing/compute, content, control at edge cloud
- Supporting massive diversity of devices, applications, and end services
- New experiences with new levels of immersion, immediacy, personalization and privacy





Thank you!

Follow us on:   

For more information, visit us at:

www.qualcomm.com & www.qualcomm.com/blog

Nothing in these materials is an offer to sell any of the components or devices referenced herein.

©2018-2019 Qualcomm Technologies, Inc. and/or its affiliated companies. All Rights Reserved.

Qualcomm is a trademark of Qualcomm Incorporated, registered in the United States and other countries. Other products and brand names may be trademarks or registered trademarks of their respective owners.

References in this presentation to “Qualcomm” may mean Qualcomm Incorporated, Qualcomm Technologies, Inc., and/or other subsidiaries or business units within the Qualcomm corporate structure, as applicable. Qualcomm Incorporated includes Qualcomm’s licensing business, QTL, and the vast majority of its patent portfolio. Qualcomm Technologies, Inc., a wholly-owned subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, substantially all of Qualcomm’s engineering, research and development functions, and substantially all of its product and services businesses, including its semiconductor business, QCT.