

# CDMA Technology Roadmap

Radio Access Network Enhancements

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Charlie Martin

CTO-Wireless

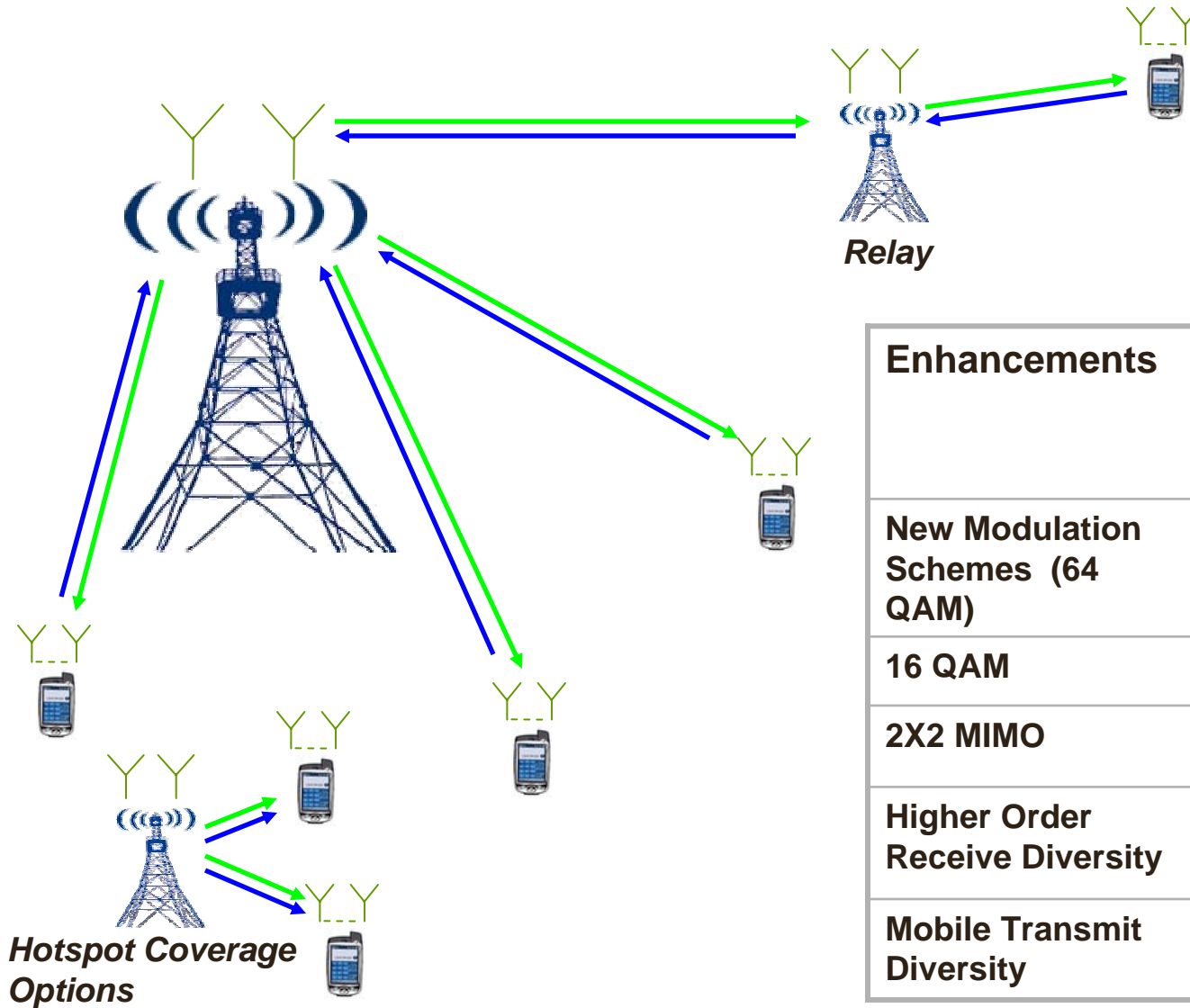
Huawei Technologies, USA

[www.huawei.com](http://www.huawei.com)

HUAWEI TECHNOLOGIES CO., LTD.



# Targeted Enhancements



Enhancements	Forward Link	Reverse Link
New Modulation Schemes (64 QAM)	X	
16 QAM		X
2X2 MIMO	X	X
Higher Order Receive Diversity	X	
Mobile Transmit Diversity		X

# Summary

- **Higher Order Modulation Schemes**
  - ❑ Introduce higher order modulation schemes to enhance existing Adaptive Modulation and Coding capabilities
  - ❑ Improve transmitted bits/symbol => opportunistic potential to improve User throughput and Sector capacity
- **Advanced Multi-Antenna Technologies**
  - ❑ Multiple Input, Multiple Output (2X2 or 1X2)
  - ❑ Improved User throughput and Cell Capacity
  - ❑ Apply to special situations such as coverage extension and hotspots => picocells or relay base station
- **Higher Order Rx Diversity in Mobiles**
  - ❑ 2/3/4 antenna receive diversity for different mobile form factors
  - ❑ Improved cell edge performance for the forward link
- **Mobile Tx Diversity**
  - ❑ Different form factors can exploit the benefits and yield improved cell edge performance for the reverse link
- **Coverage Extension Options**
  - ❑ Relay small form-factor Base Stations with wireless backhaul (using CDMA spectrum)

***Options will be weighed versus complexity of implementation and attention to a core CDMA strength - Ease of technology upgrade***

# Thank You

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