

6G



6G Mobile Wireless Communications

Vision, Roadmap, Technologies & Use Cases

Introduction

ZAHID GHADIALY

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@3g4gUK

Legal Disclaimer

This presentation is intended to stimulate discussion on some of the exciting current and future developments in digital communications technology and networks. It also contains some forward-looking statements, research and speculation that may never become part of standards.

It strives to provide the latest and most correct information. Due to the vastness of standards, constant change and revision, it is possible that the following information may not be entirely up to date or correct. E&OE.

There are references to information in public domain (books, websites, standard documents, etc.) in this material. Attempt has been made to give credit to all such references wherever possible. The original copyright holders retain the copyright to their material.

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Before we begin

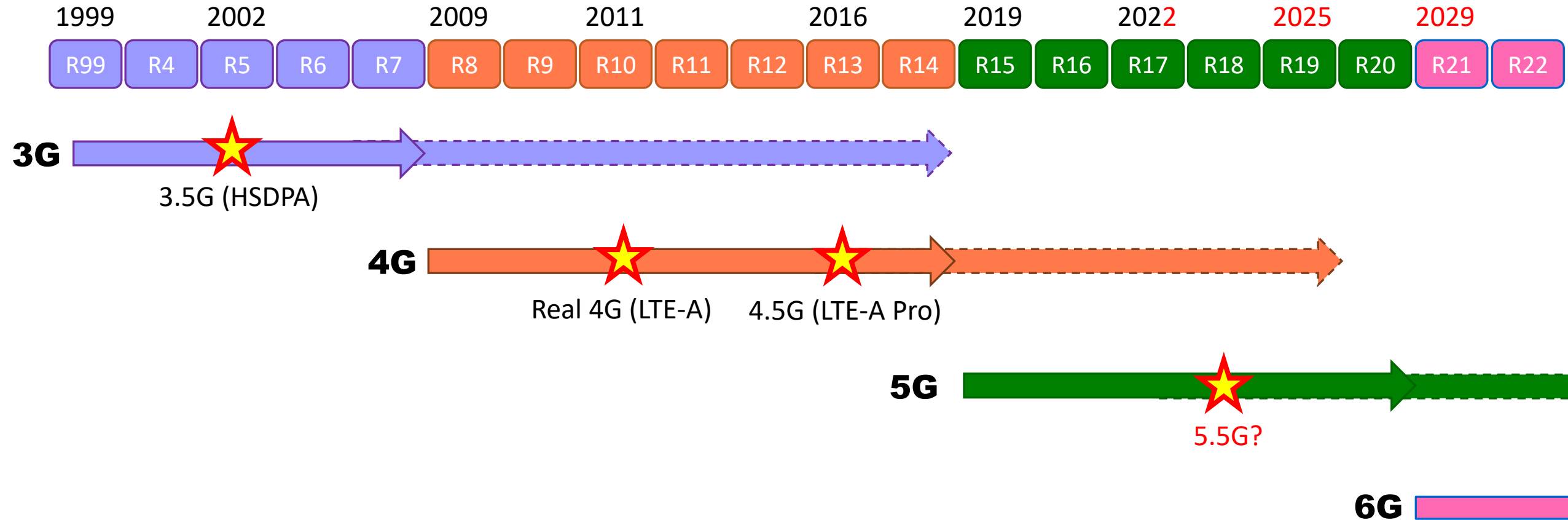
Please Note:

- This is a very basic introductory course.
- This is designed for people with deep understanding of the mobile wireless technology and ecosystem.
- Even if you are a beginner in this domain, you will learn some things but not everything.
- There is no programming involved in any way.
- There are no review questions / answers.
- I will provide a lot of references that you can use to study this topic further.

What exactly is 6G?

When is 6G coming?

3GPP Releases Timeline



Red text indicates dates and features are not confirmed

3GPP Release Dates on [3GPP Portal](#)

If 5G is being launched just now, why are we talking about 6G already?

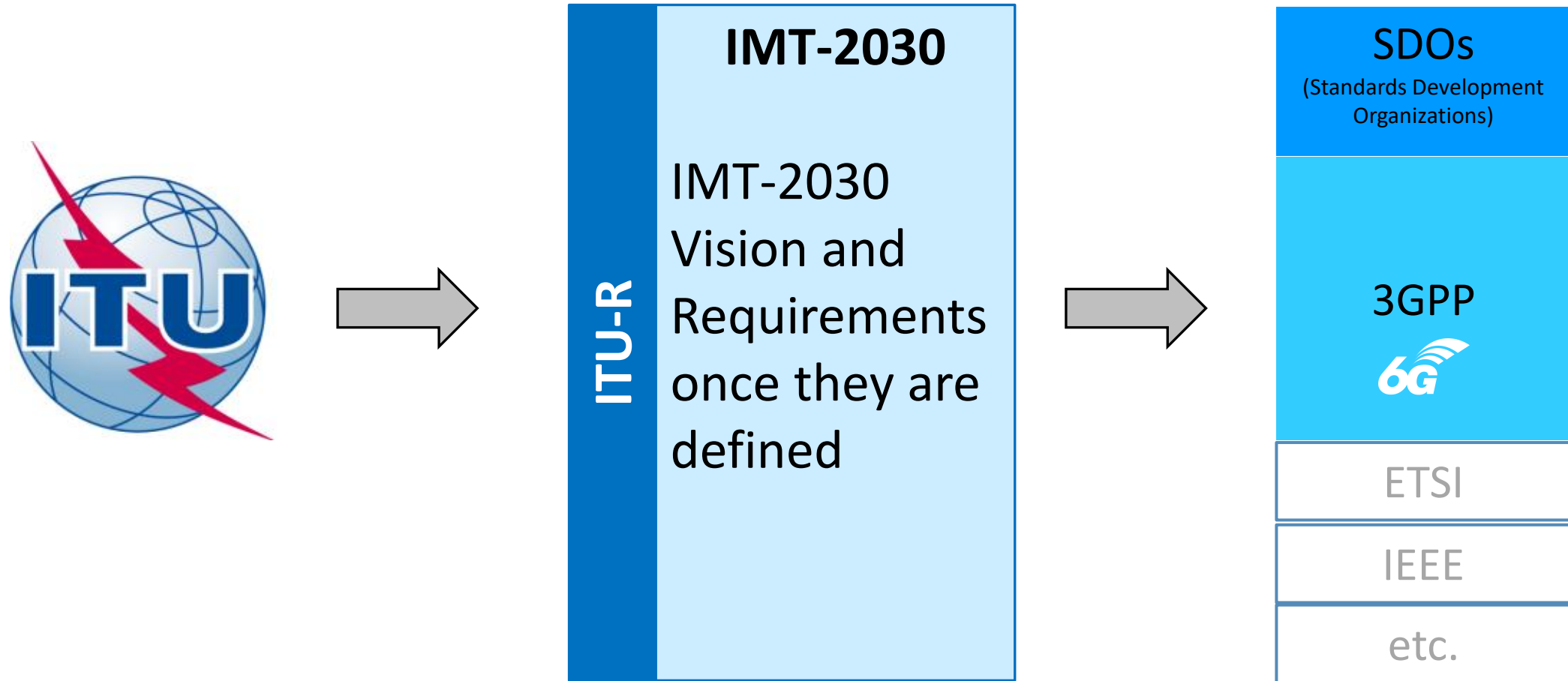


Technologies that didn't make it to 5G



Who is standardising 6G?

Tentative 6G Standardisation Process



Will 6G be called 6G?

Will 6G be called 6G?

Marketing Name	ITU Name	3GPP Name	RAN Name	Core Name	System Name
3G	IMT-2000	UMTS	UTRAN	UMTS Core	UMTS System
3.5G	Enhanced IMT-2000	UMTS HSPA	UTRAN	UMTS Core	UMTS System
4G	IMT-Advanced	LTE-Advanced	E-UTRAN	Evolved Packet Core (EPC)	Evolved Packet System (EPS)
5G	IMT-2020	5G	New Radio (NR)	5G Core (5GC)	5G System (5GS)
6G	IMT-2030	6G	?	?	?

Red text indicates that the names have not been confirmed.

Course Outline!

Course Outline: An Introduction to 6G Wireless

- Part 1: Introduction
- Part 2: 6G Vision
- Part 3: 6G Use Cases & Applications
- Part 4: 6G Timeline
- Part 5: 6G Requirements
- Part 6: 6G Groups
- Part 7: 6G Technologies
- Part 8: 6G Devices
- Part 9: Course Summary and Conclusion

Background Material

- The 3G4G Blog: 3G -> 3.9G, May 2007 ([link](#))
- The 3G4G Blog: IMT Advanced = 4G, June 2007 ([link](#))
- The 3G4G Blog: Revised paper on “4G” by 3G Americas, Aug 2008 ([link](#))
- 3GPP system standards heading into the 5G era, Spring 2014 ([link](#))
- The 3G4G Blog: What is (pre-5G) 4.5G?, Oct 2014 ([link](#))
- ITU: ITU agrees on key 5G performance requirements for IMT-2020, Feb 2017 ([link](#))
- The 3G4G Blog: IMT-2020 (5G) Requirements, March 2017 ([link](#))
- ITU IMT-2020 Page ([link](#))
- 3GPP Release-15 Page ([link](#))

Thank You

To learn more, visit:

3G4G Website – <https://www.3g4g.co.uk/>

3G4G Blog – <https://blog.3g4g.co.uk/>

Telecoms Infrastructure Blog – <https://www.telecomsinfrastructure.com/>

Operator Watch Blog – <https://www.operatorwatch.com/>

Connectivity Technology Blog – <https://www.connectivity.technology/>

Free 5G Training – <https://www.free5gtraining.com/>

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