

WiMAX and 3GPP LTE: how are they related ?

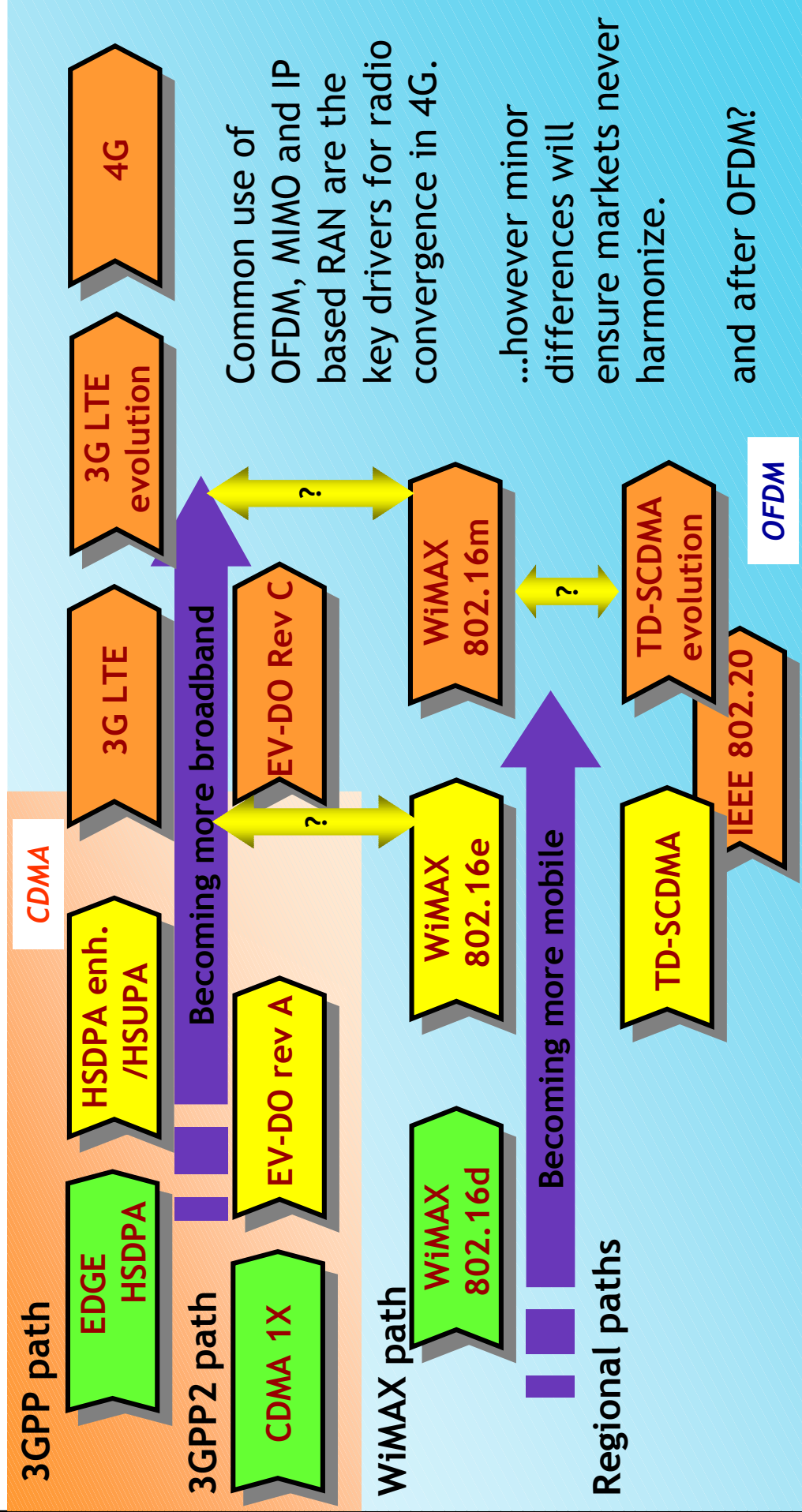
Prepared for European Wireless 2007 Panel



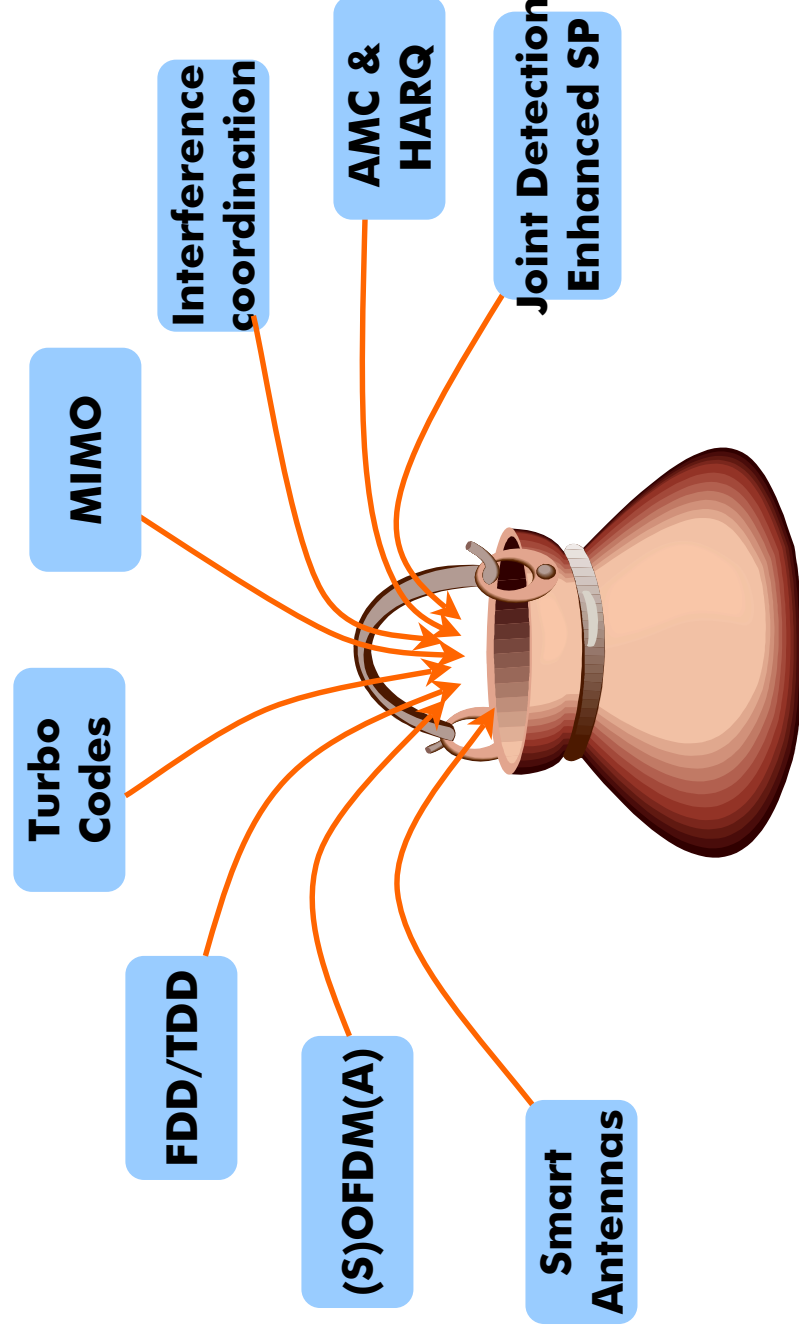
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Heading towards 4G

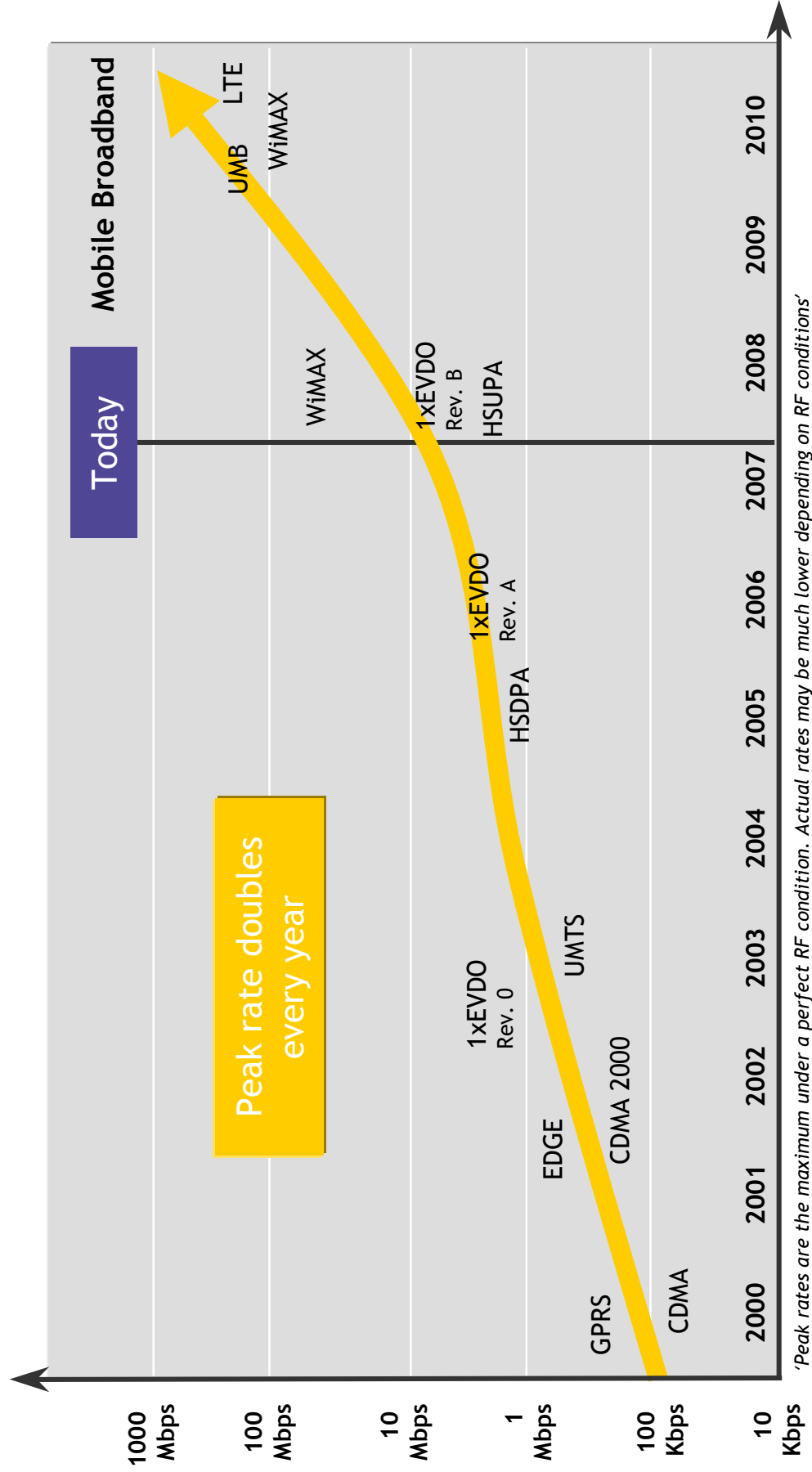


Basic ingredients of evolutions ...

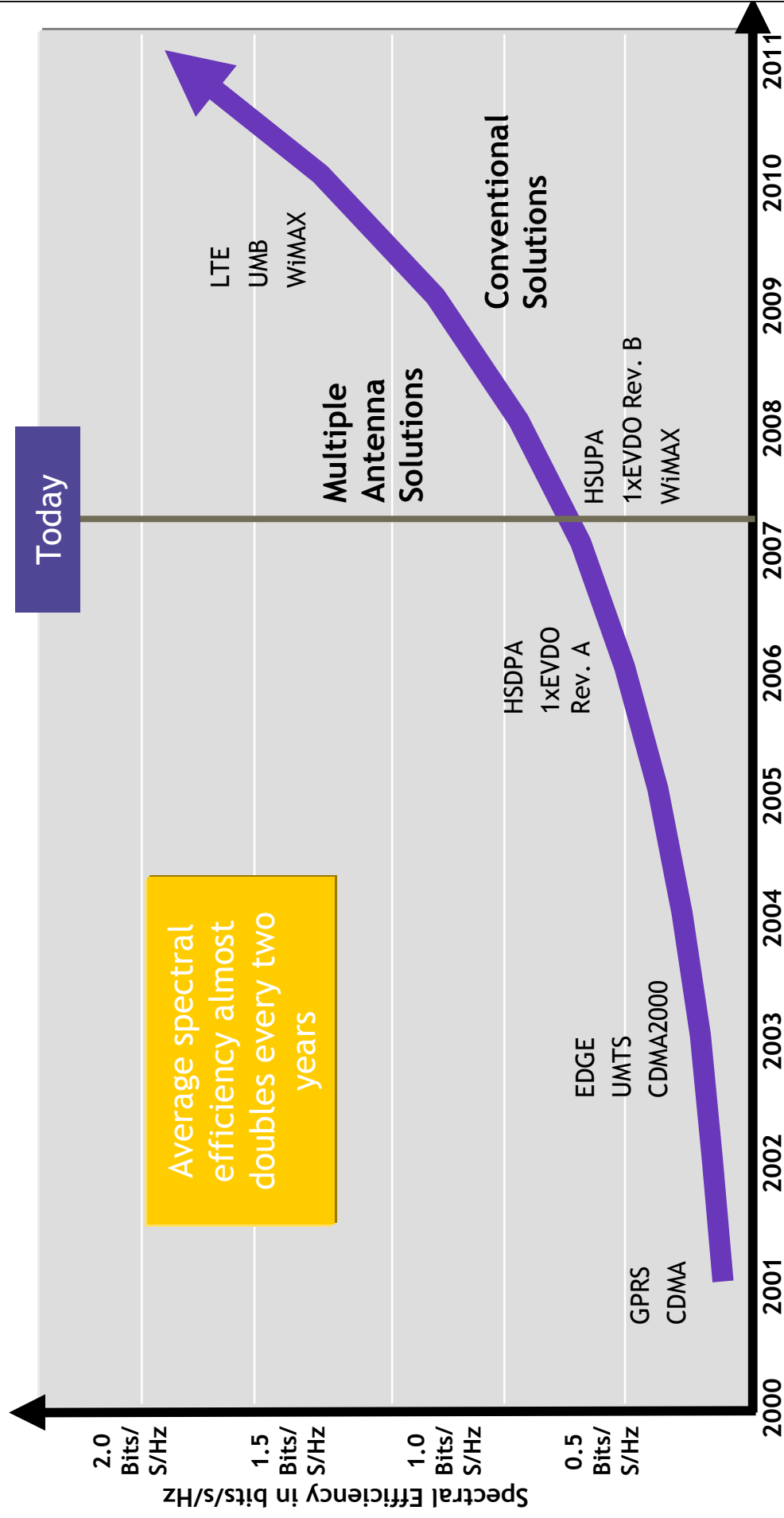


- All evolutions will rely on the same basic ingredients to achieve similar goals, so where will the difference be ?

4G Technologies Deliver Similar Speed and Performance...



... And Provide Similar Improvements in Spectral Efficiency



Complex landscape because of multiple frequency bands

| Band | Notes | GSM | UMTS/LTE | CDMA/UMB | WiMAX | TD-SCDMA |
|---------|--------------------------|-----|----------|----------|-----------|----------|
| 450 | Euro, Africa, APAC, CALA | | | | FDD | |
| 700 | NA, Euro, APAC | | | | TDD(+FDD) | |
| 850 | NA, APAC | | | | FDD | |
| 900 | Euro, APAC | | | | FDD | |
| 1.7/2.1 | NA | | | | FDD | |
| 1.8 | Euro, APAC | | | | FDD | |
| 1.9 | NA, APAC | | | | FDD | |
| 2.0 | Euro, APAC | | | | TDD | |
| 2.0/2.5 | Euro, APAC | | | | FDD | |
| 2.3 | NA, APAC | | TDD/FDD | | TDD | |
| 2.5 | NA, Euro | | TDD/FDD | | TDD | |
| 3.5 | Euro, APAC | | TDD/FDD | | TDD | |

In use
 Coming
 May be possible
 Possible but no support
 Not possible

Some considerations

- Three main radio technologies streams (3GPP, 3GPP2, IEEE-WiMAX Forum)
 - All follow the same trend
 - The target availability dates are different for the 3 streams
- There is a global move to OFDM adoption. WCDMA based 3G has limited performance
- WiMAX TDD now exists as a commercial ecosystem, and is currently ahead of competition.
- Late availability of LTE may negatively impact LTE market size for the benefit of WiMAX
- Alcatel-Lucent is actively working on the 3 streams, its customers can benefit from its global experience

