



WRC-07 Outcome (on IMT)

ECC PT 1 Chairman

Dipl.-Ing. (FH) EUR ING
Peter Scheele

International Affairs,
Frequency Utilisation
Plans



Canisiusstr. 21
55122 Mainz
Germany

Tel.: +49 6131 18 3115
Fax: +49 6131 18 5604
E-Mail: peter.scheele@bnetza.de



WRC-07 Outcome (on IMT)

Content:



AI 1.9



AI 1.4



WRC-07 results on bands



WRC-11 (AI related to IMT):



CEPT situation in 4 parts of the spectrum



CEPT Work Items on IMT



Considerations on IMT



Conclusion



WRC-07 Outcome (on IMT)

AI 1.9:

“to review the technical, operational and regulatory provisions applicable to the use of the band 2 500-2 690 MHz by space services in order to facilitate sharing with current and future terrestrial services without placing undue constraint on the services to which the band is allocated”



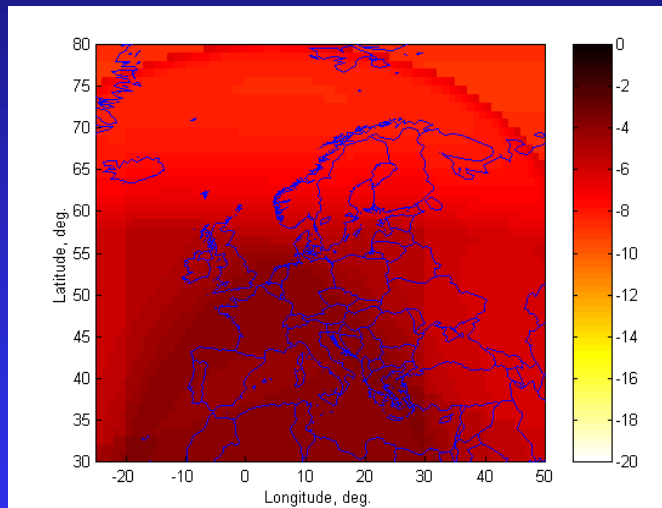
WRC-07 Outcome (on IMT)

- The overall goal of CEPT was to efficiently safeguard the current and future terrestrial systems in the band 2 500-2 690 MHz;
- A few registered MSS- and BSS systems in Asia were exempt form the new limits;
- New PFD values were agreed that fully protect the terrestrial services in the band;
- The MSS allocation (2 x 20 MHz) in Region 1 (Europe, Africa, ...) was deleted;



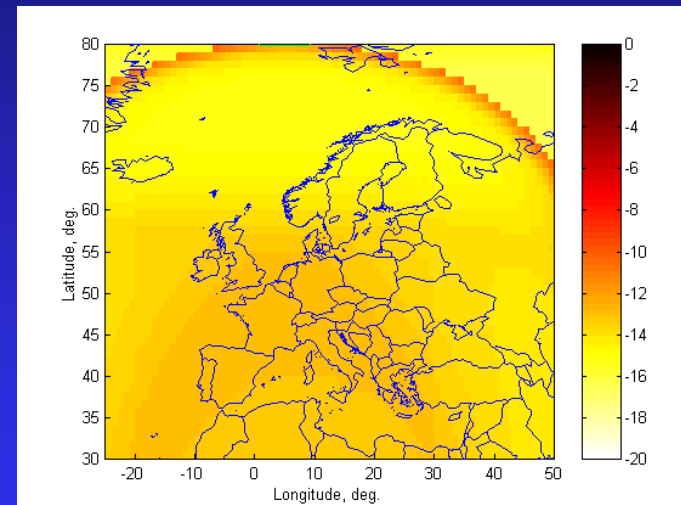
WRC-07 Outcome (on IMT)

Before WRC-07:
Risk of strong interference
from satellites



→ 100% of the IMT-2000
base stations are interfered

After WRC-07:
IMT-2000 adequately
protected



→ Less than 2% of the IMT-
2000 base stations are
interfered



WRC-07 Outcome (on IMT)

AI 1.4:

“to consider frequency-related matters for the future development of IMT-2000 and systems beyond IMT-2000 taking into account the results of ITU-R studies in accordance with Resolution 228 (Rev.WRC-03)”



WRC-07 Outcome (on IMT)





WRC-07 Outcome (on IMT)

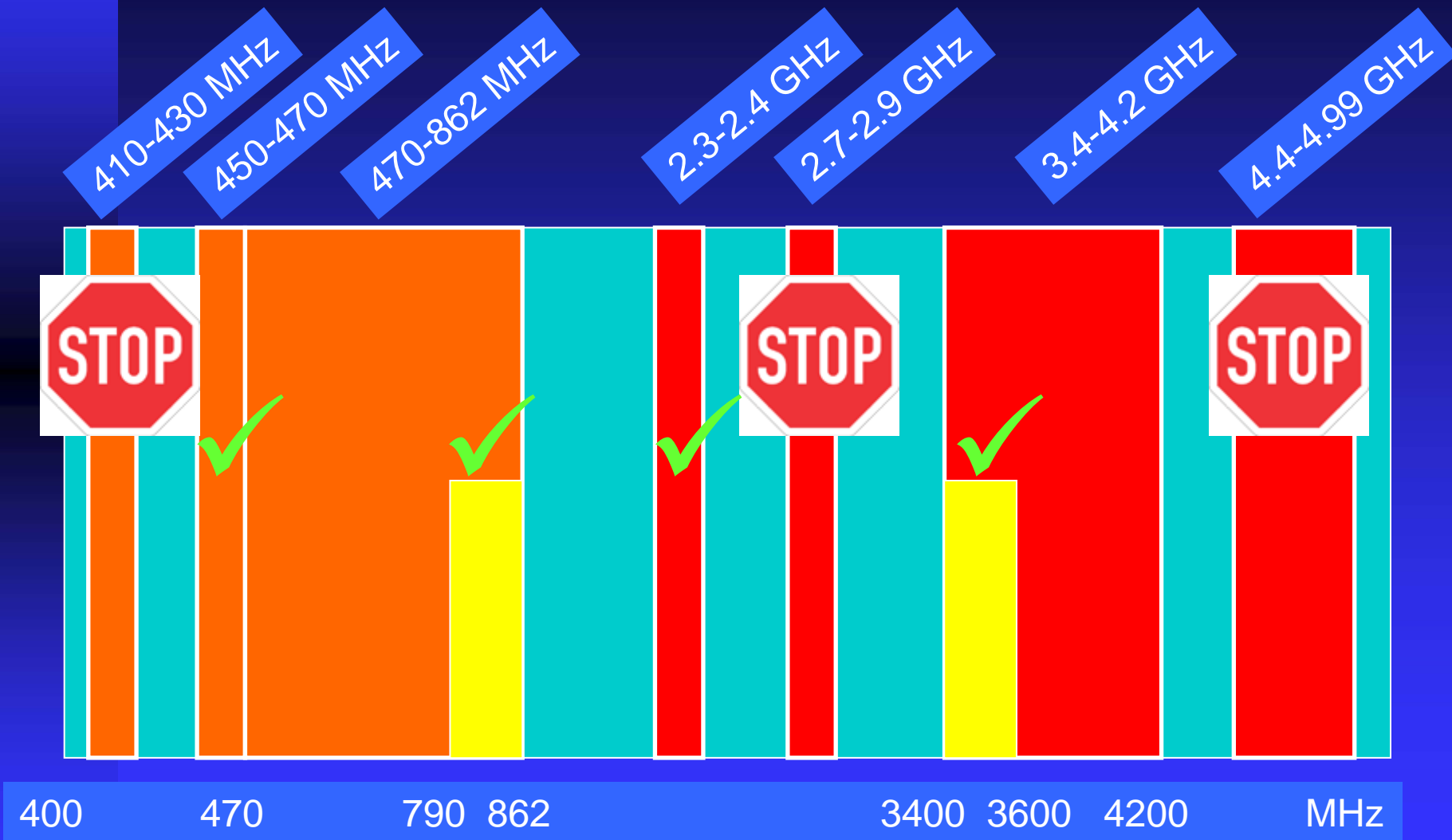
Candidate bands (CPM report)

Bands for Coverage
410 -430 MHz
450 – 470 MHz
470 – 806/862 MHz (ITU-R sharing studies not finalised)

Bands for Capacity
2300 - 2400 MHz
2700 – 2900 MHz
3400 – 4200 MHz
4400 – 4990 MHz



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WRC-07 Outcome (on IMT)

Terrestrial Component:

BAND:	CEPT proposal:	Identified:	Subband in Region 1:	Total:
450-470 MHz	-----	Y	450-470 MHz*	20 MHz
470-862 MHz	NOC	Y	790-862 MHz**	72 MHz
2300-2400 MHz	NOC	Y	2300-2400 MHz*	100 MHz
3400-4200 MHz	3400-3800 MHz	Y	3400-3600 MHz**	200 MHz
695 MHz - 1135 MHz				<u>392 MHz</u>



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- * Some countries (USA, CAN) have in the Final Acts of the Conference indicated, that the bands 450-470 MHz and 2.3-2.4 GHz are not available for IMT in their countries.
- ** These bands are available subject to additional constraints (procedural and timely). For the band 790 – 862 MHz, ITU-R will carry out compatibility studies under WRC-11 AI 1.17.



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Satellite Component:

BAND:	CEPT proposal:	Identified	Subband:	Total:
1518-1525 MHz / 1668-1675 MHz	Support	Y	-----	2 x 7 MHz
				<u>14 MHz</u>



WRC-07 Outcome (on IMT) Band 470-862 MHz

R1

Before WRC-07

Broadcasting

5.316 (Mobile)

R1

After WRC-07

Broadcasting

5.316, 5.316A, MOBILE from 2015

5.317A (IMT)

470

698

790

806

862 MHz



WRC-07 Outcome (on IMT)

Band 3.4-3.6 GHz

R1

5.AAA (Mobile Primary)

5.AAA (IMT FN)

R2

Mobile Primary (FN 5.ZZZ);
No IMT FN

Mobile Primary;
No IMT FN

R3

Mobile Primary (FN 5.BBB);
7 Countries

Mobile Primary

IMT (FN 5.AAA1);
3 Countries

IMT (FN 5.CCC);
9 Countries

3400

3500

3600 MHz



WRC-07 Outcome (on IMT)

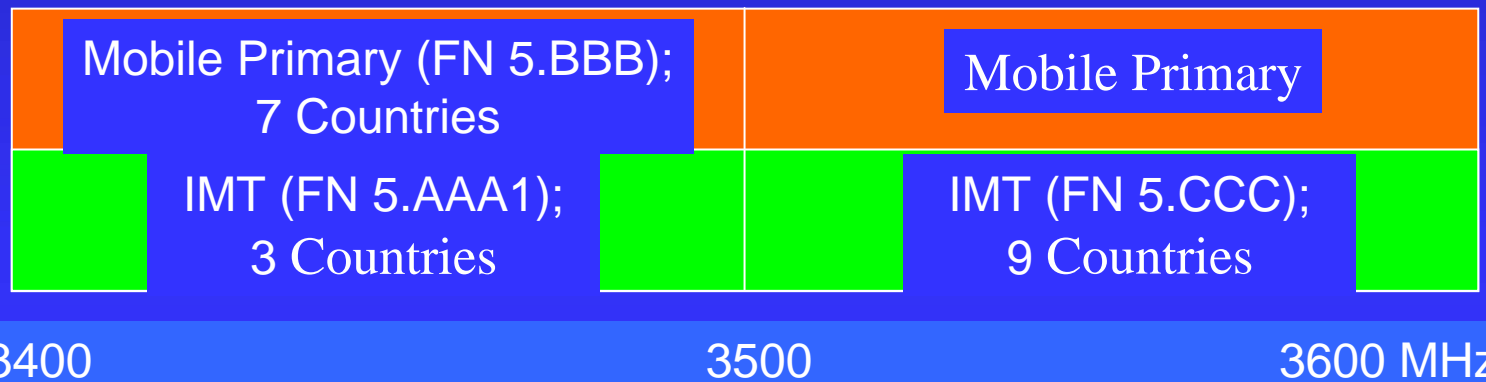
Band 3.4-3.6 GHz

5.BBB *Different category of service:* in Bangladesh, China, India, Iran (Islamic Republic of), New Zealand, Singapore and French Overseas Communities

5.AAA1 In Korea (Rep. of), Japan and Pakistan

5.CCC In Bangladesh, China, Korea (Rep. of), India, Iran (Islamic Republic of), Japan, New Zealand, Pakistan and French Overseas Communities

R3





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WRC-11 (AI related to IMT):

AI 1.17: to consider results of sharing studies between the mobile service and other services in the band 470-730 MHz in Regions 1 and 3, in accordance with Resolution [COM6/16] (WRC 07), to ensure the adequate protection of services to which this frequency band is allocated, and take appropriate action;

AI 1.2: taking into account the ITU-R studies carried out in accordance with Resolution 951 (WRC 07), to take appropriate action with a view to enhancing the flexibility of the framework;

AI 1.19: to consider regulatory measures and their relevance, in order to enable the introduction of software defined radio and cognitive radio systems, based on the ITU-R studies, in accordance with Resolution [COM6/16] (WRC 07),



WRC-07 Outcome (on IMT)

WRC-11 (AI related to IMT):

AI 1.25: to **Satellite Component** mobile-satellite service, in accordance with the decision of the World Radiocommunication Conference (WRC-07);

AI 6: to identify the spectrum for the **WRC-11 / WRC-15** next world radiocommunication conference,

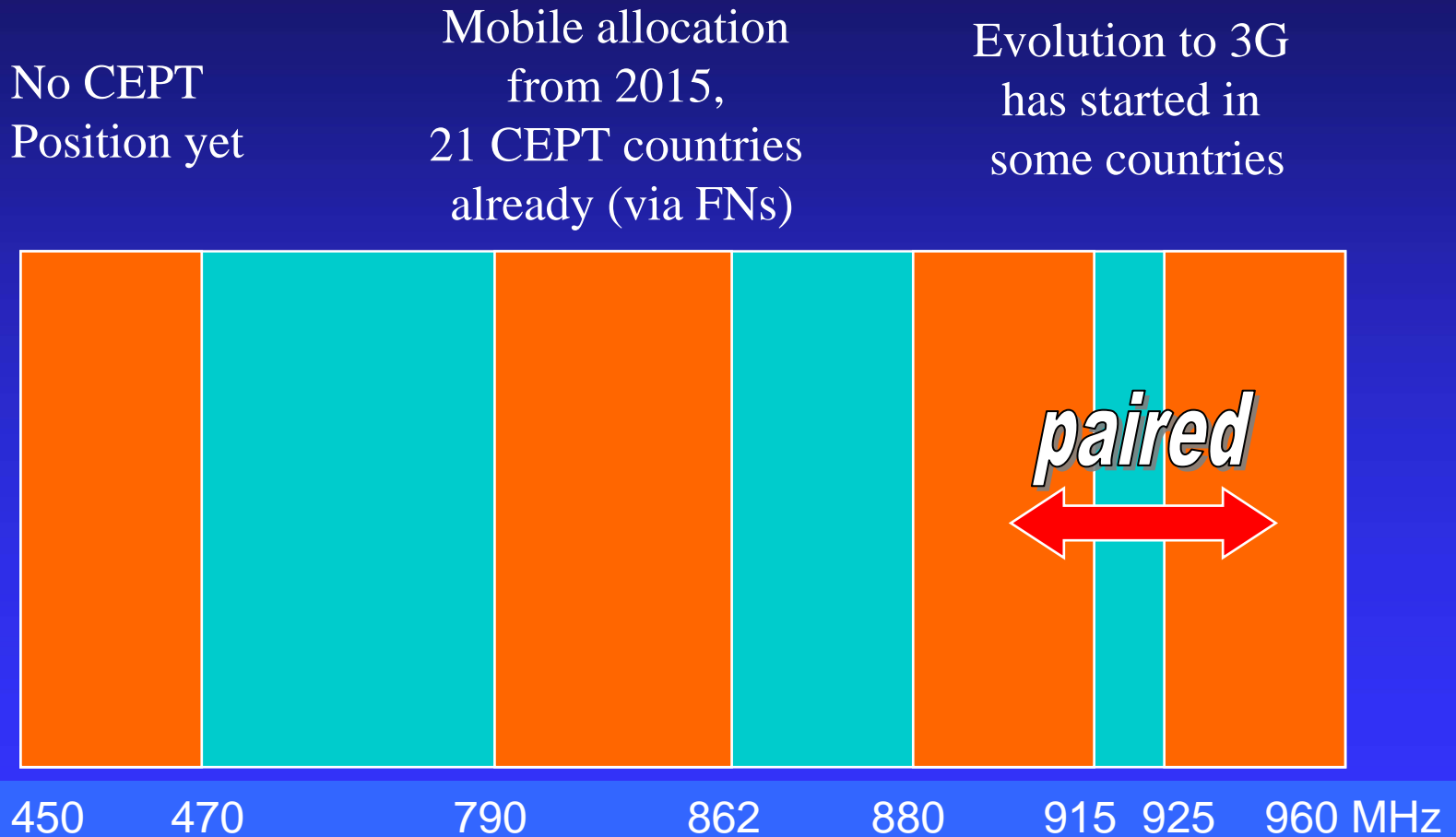
REMARK 1: WRC-07 did not identify the amount of spectrum as estimated in ITU-R report M.2078!

REMARK 2: There is no agenda item for WRC-11 for additional terrestrial spectrum for IMT!



WRC-07 Outcome (on IMT)

CEPT situation: Bands below 1 GHz (1)

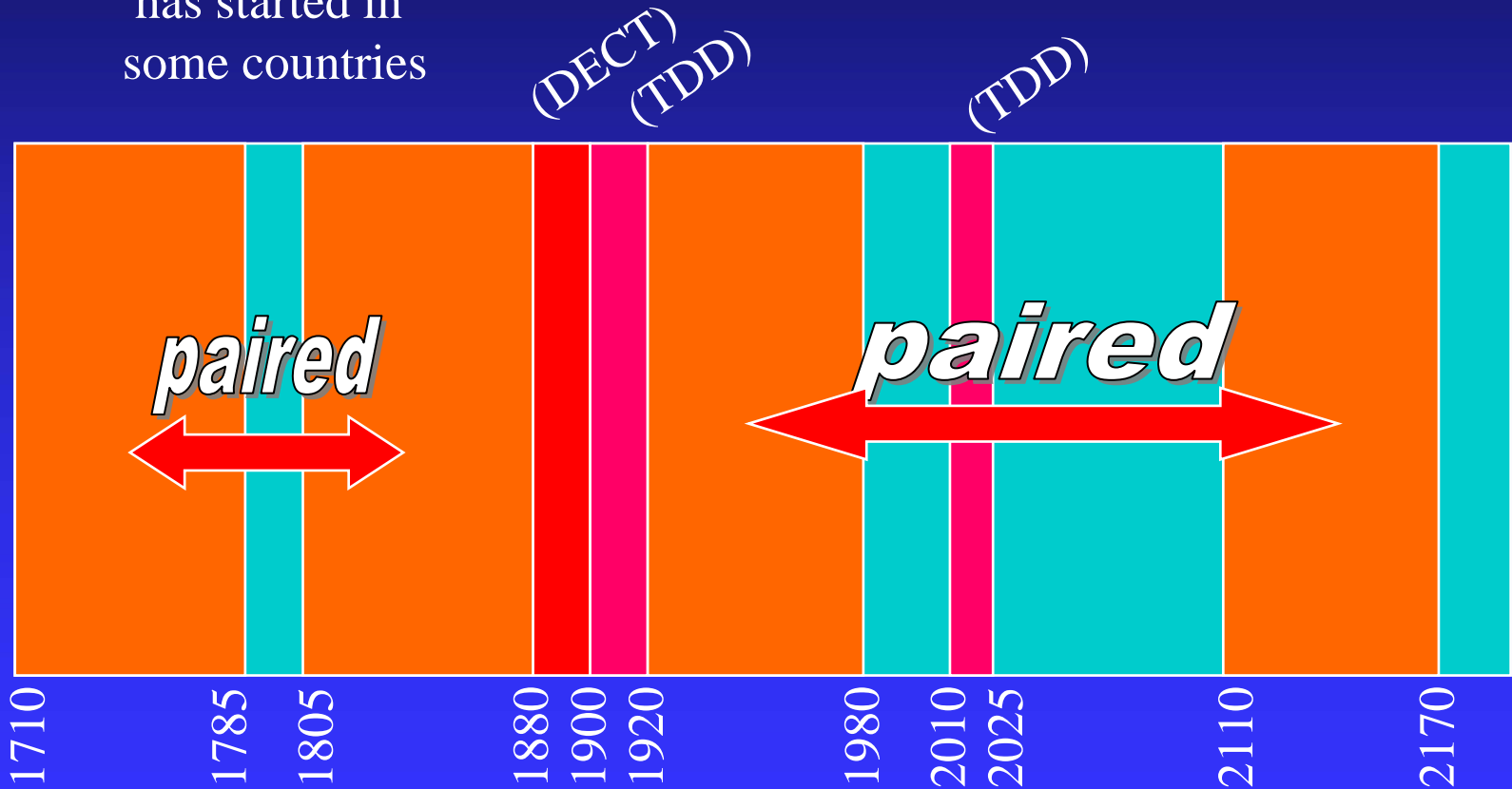




WRC-07 Outcome (on IMT)

CEPT situation: Bands around 2 GHz (2)

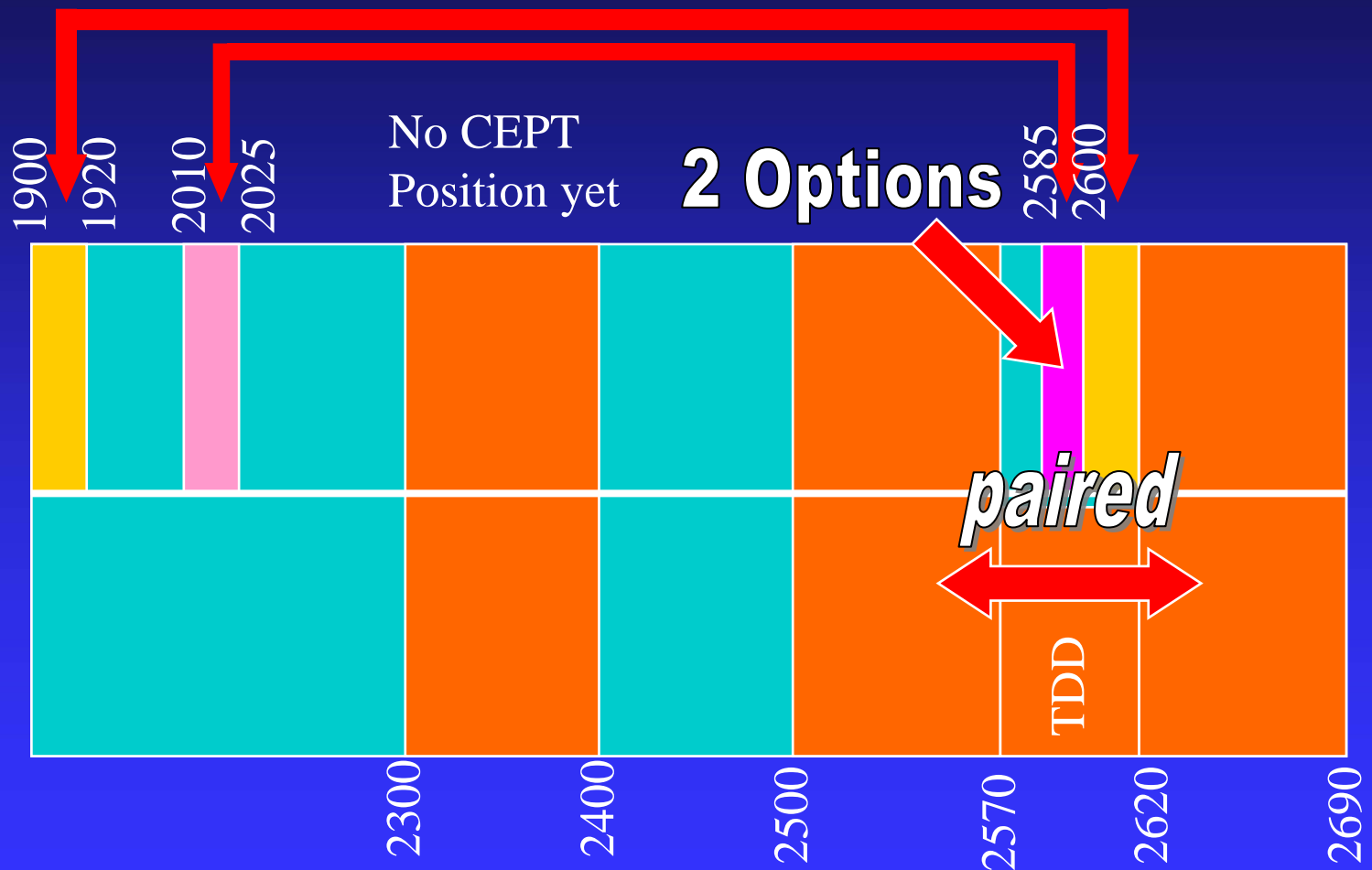
Evolution to 3G
has started in
some countries





WRC-07 Outcome (on IMT)

CEPT situation: Bands around 2.5 GHz (3)

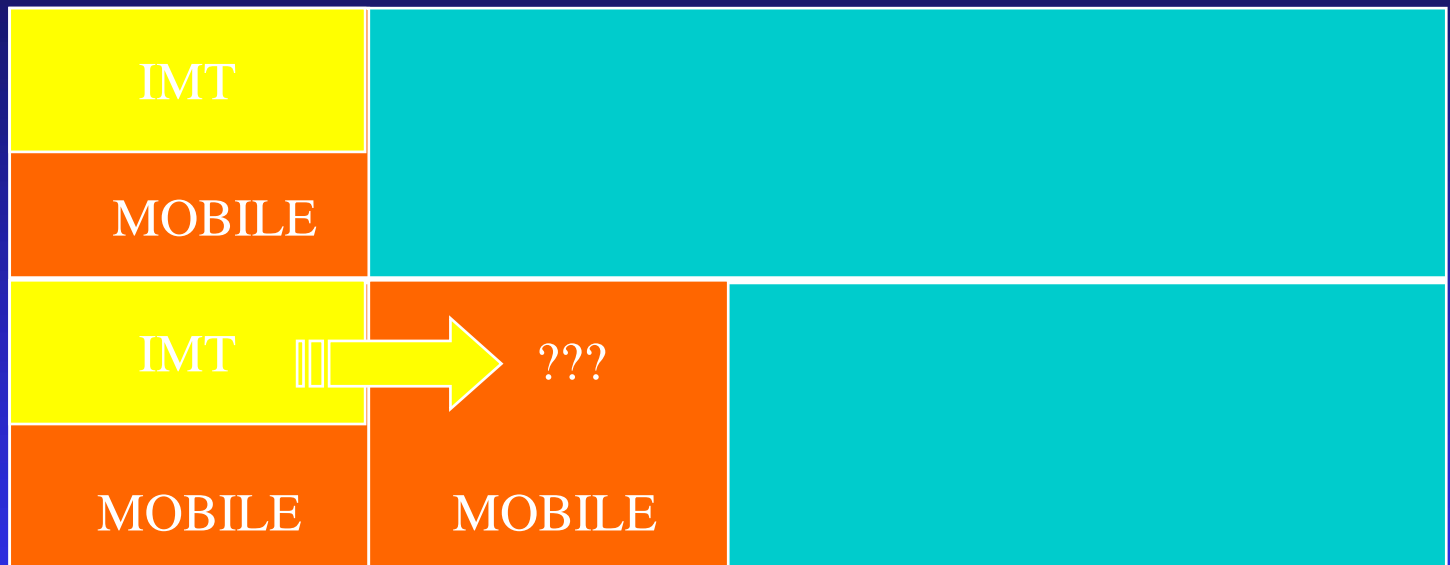




WRC-07 Outcome (on IMT)

CEPT situation: Bands above 3 GHz (4)

ITU
CEPT



BWA, ECC Decision(07)02

3400

3600

3800

4200 MHz



WRC-07 Outcome (on IMT)

CEPT Work Items on IMT (1)

- Further sharing studies on IMT bands;
- Channel arrangements for new bands;
- Decision within CEPT on 450-470 MHz and 2.3-2.4 GHz bands;
- Consider and decide on possible use of the band 3.4-3.6/3.8 GHz;



WRC-07 Outcome (on IMT)

CEPT Work Items on IMT (2)

- Carry out additional studies to verify and support a new IMT agenda item for WRC-15 (WRC-11 AI 6);
- Monitor and contribute to IMT-related WRC-11 AIs (1.2, 1.19, 1.25);
- Review and update existing ECC documents on IMT (ERC/ECC Reports, ECC Recommendations and ECC Decisions);
- Border coordination issues (New bands and new methods in all bands);



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Considerations on IMT (1)

- There are a lot of misunderstandings regarding IMT, the reasons for IMT, the benefits from IMT and those who can use those benefits:
- Example 1:
- A lot of countries (developing and small (European)) are opposing IMT, but they need the benefits of IMT most (economies of scale, globally harmonised bands, global availability, etc.);



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Considerations on IMT (2)

- Example 2:
- We have a crazy situation regarding IMT in the Radio Regulations:
- Especially in the 3.4-3.6 GHz band we have a situation, that one country can use any mobile application except IMT without any constraints;
- And in all mobile bands without IMT FN one can use IMT without any constraints;



WRC-07 Outcome (on IMT)

Conclusion

- There is a lot of work to do on IMT;
- Those who support IMT have to think how to approach the issues, how to convey “the message”;
- In the future, IMT proponents have to focus on “the real big issues”;
- IMT proponents have to work together, not against each other!



WRC-07 Outcome (on IMT)

The end

