

SPECTRUM FOR MOBILE

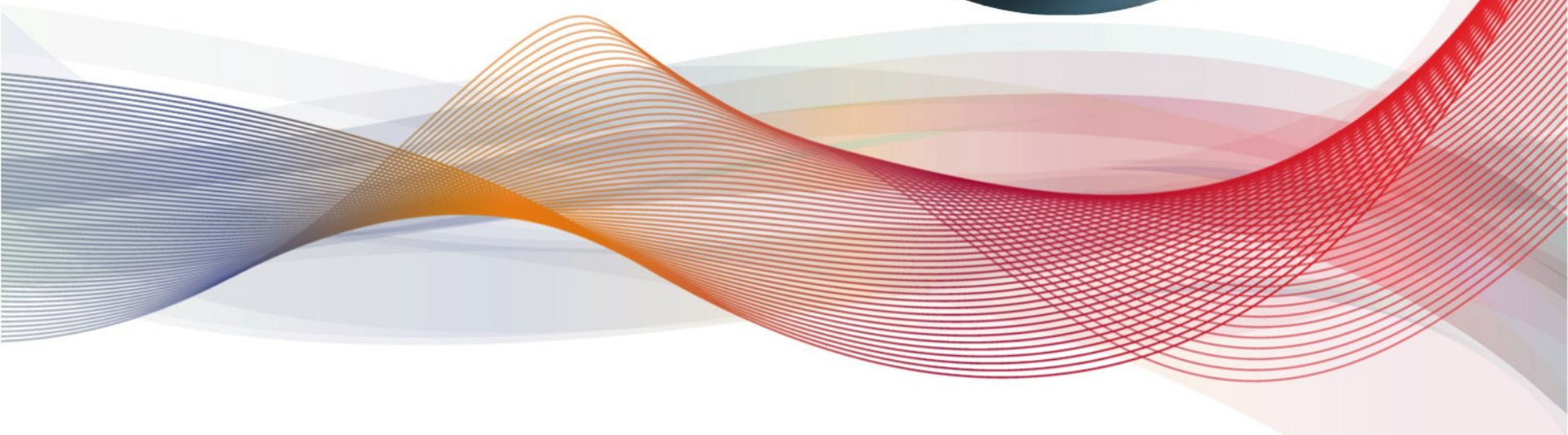
Digital Dividend Status

*Peter Lyons, Head of Middle East and North Africa,
Government & Regulatory Affairs, GSMA*

17 MAY 2014



GSMA OVERVIEW



GSMA BY THE NUMBERS



MEMBERSHIP



800

mobile operators in
over **220** countries



230 associate
members

PRESENCE



Offices in
9 countries
serving every region



Staff based in
26 countries
representing
36 nationalities

MOBILE REACH



6.6
billion
mobile
connections



3.2 billion
individual subscribers

ENABLING A MOBILE FUTURE



ACCELERATING MOBILE INNOVATION THROUGH GLOBAL INITIATIVES

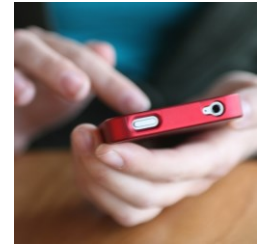
CONNECTED LIVING

Realising the potential of connected devices across many sectors to improve lives



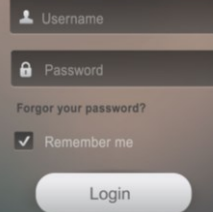
FUTURE COMMUNICATIONS

Creating an enhanced mobile experience via voice-over-IP, messaging and content-sharing applications



MOBILE COMMERCE

Enabling transactional services via contactless radio technology

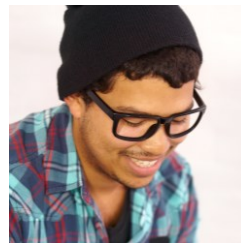


NETWORK APIs

Developing interfaces to fully exploit mobile network capabilities

MOBILE IDENTITY

Authenticating users securely and conveniently

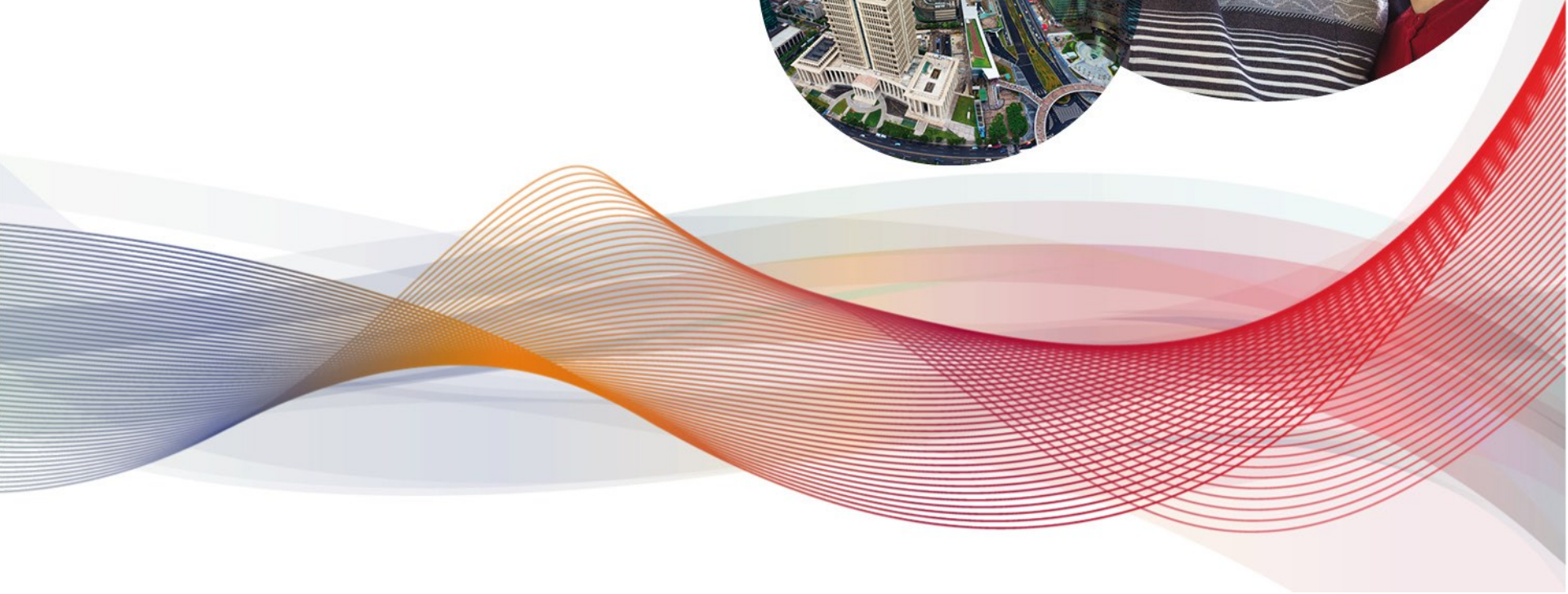


SPECTRUM

Promoting effective spectrum policy and delivery of mobile broadband



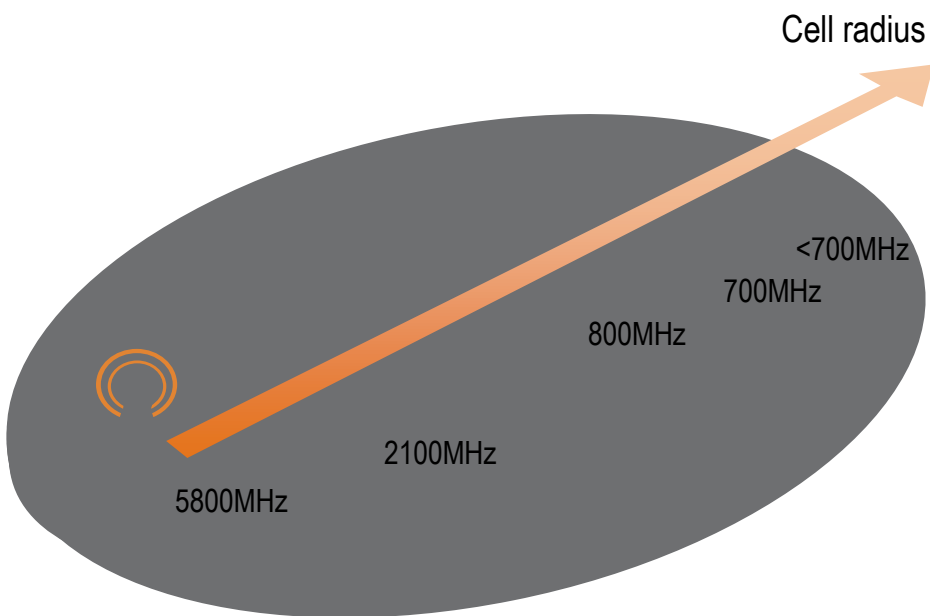
BENEFITS OF THE DIGITAL DIVIDEND



ATTRACTIVENESS OF THE SUB 1GHZ BANDS



The benefits of sub-1GHz spectrum are crucial for high quality, cost effective mobile broadband deployment



Ideal for economically deploying mobile broadband over large areas - especially in rural areas

Improved saturation in urban areas and better in-building penetration improves quality of service

The digital dividend means more 1GHz spectrum is being made available for mobile broadband services around the world

THE DIGITAL DIVIDEND



**AS TELEVISION BROADCASTING MOVES TO DIGITAL,
MORE CAN BE DONE WITH LESS SPECTRUM.**

Unique opportunity to transition significant spectrum to mobile

Ideal for rural coverage and penetration into buildings

ITU deadline of 2015 to switch off analogue television broadcasting



470MHz



Digital Broadcasting



698MHz or 790MHz



Mobile

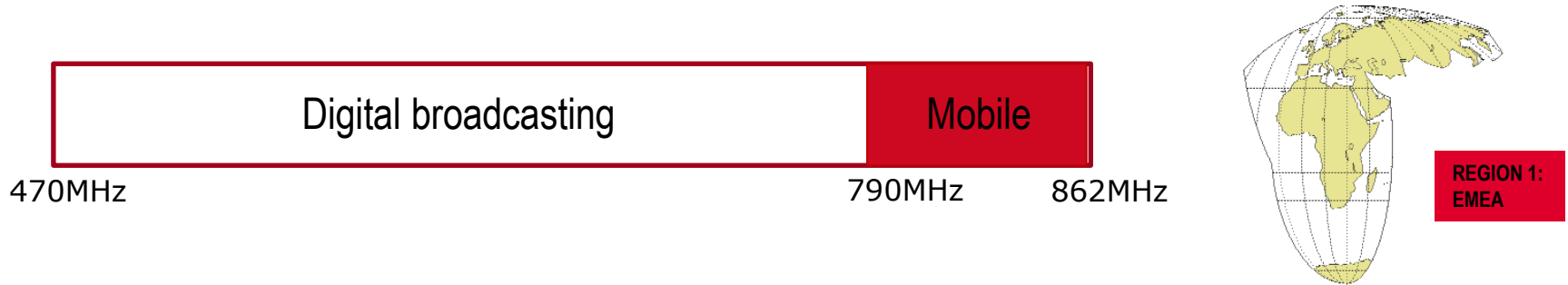


803MHz or 862MHz

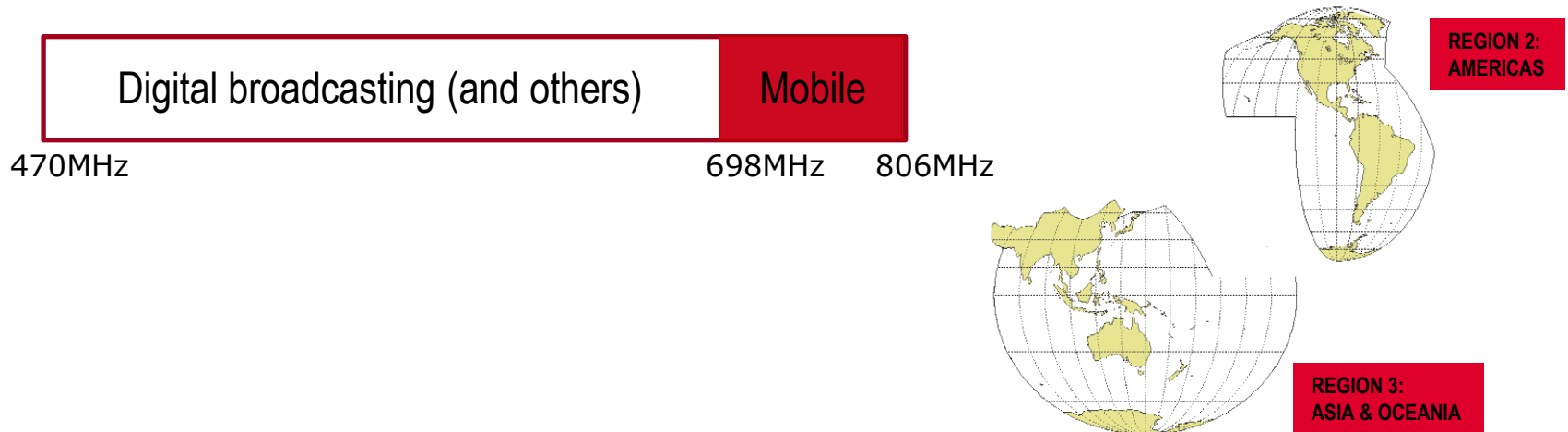
THE EMERGENCE OF THE DIGITAL DIVIDEND



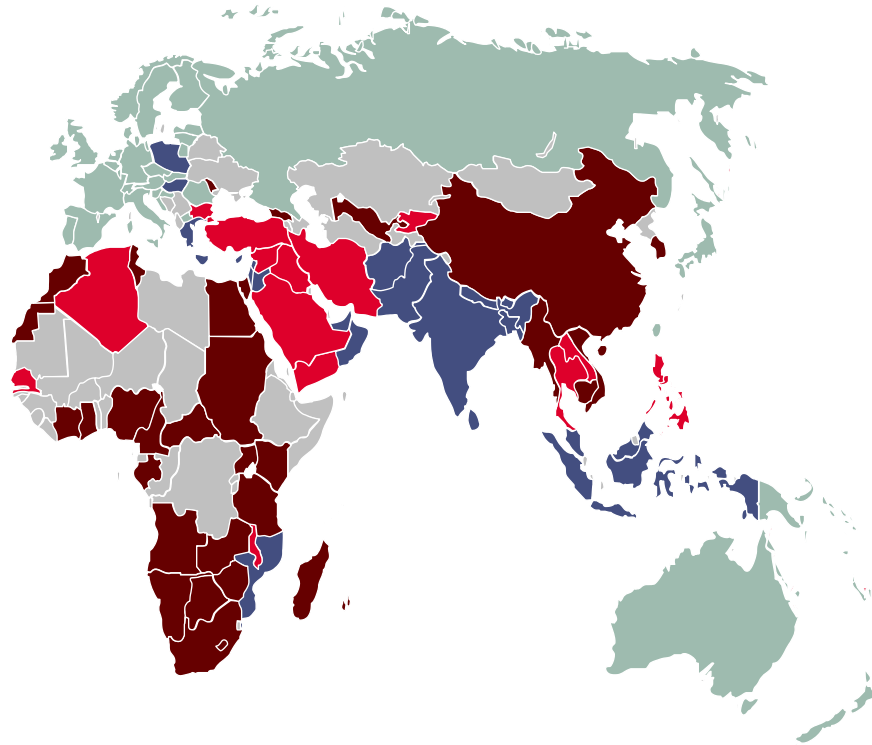
IN ITU-R REGION 1: THE 800MHz BAND WAS MADE AVAILABLE FOR MOBILE BROADBAND IN 2007



IN ITU-R REGIONS 2 & 3: THE 700MHz BAND WAS MADE AVAILABLE FOR MOBILE BROADBAND



DIGITAL DIVIDEND - REGIONAL STATUS



Digital Dividend spectrum has been licensed to MNOs according to the regionally harmonised band plan



Digital Dividend regionally harmonised band plan has been announced – not yet licensed to MNOs



Digital Dividend spectrum has been identified for mobile – band plan yet to be announced



Digital Dividend has been identified for mobile and US band plan licensed / committed for mobile services



Digital Dividend spectrum has not been allocated to mobile



No information available

DIGITAL DIVIDEND 2



- At WRC-12 a decision was taken to extend the Digital Dividend band below 790MHz in Europe, Middle East and Africa (ITU Region 1), which has launched a new phase of harmonization planning across the region

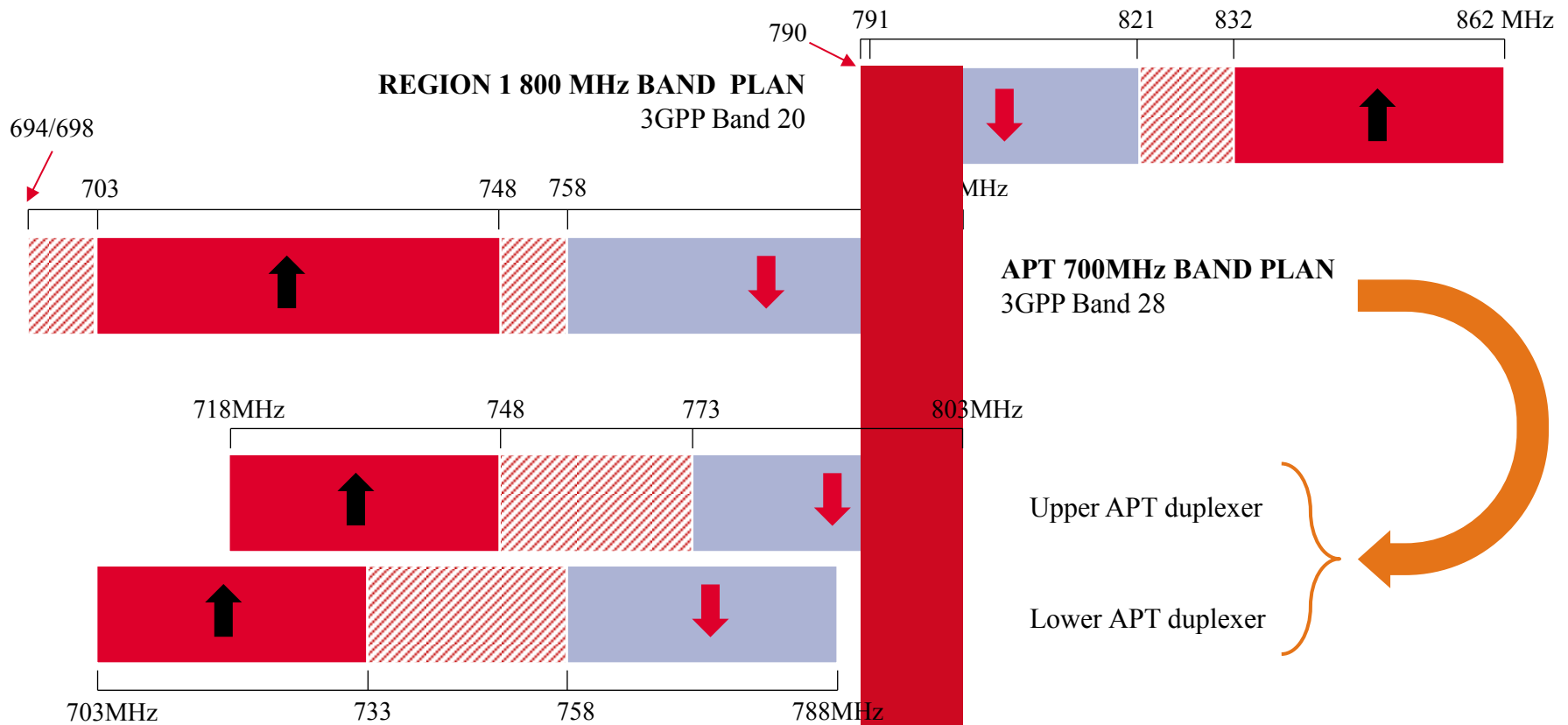


- This decision creates a unique opportunity for the ITU Region 1 to leap frog over other regions by maximising both the amount of Digital Dividend spectrum (700Mhz and 800Mhz bands) made available for mobile broadband and the degree of intra- and inter-regional harmonization

700/800MHz BAND PLAN OPPORTUNITY



THE APT700MHz BAND PLAN BEING ADOPTED IN ASIA-PACIFIC & LATIN AMERICA OVERLAPS WITH THE 800MHz BAND IN ITU REGION 1

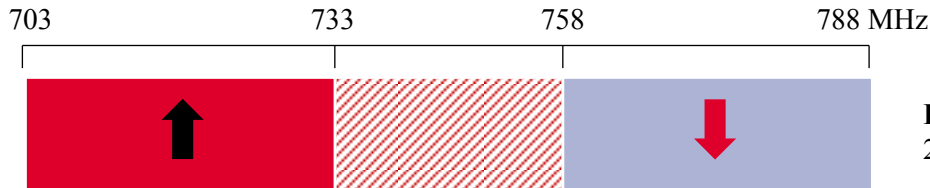
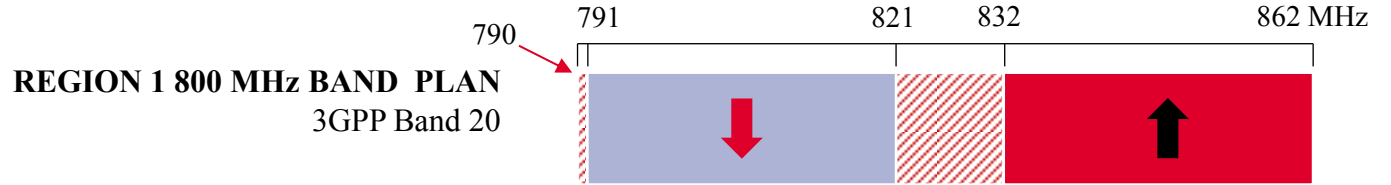


HOWEVER THE LOWER APT DUPLEXER DOES NOT OVERLAP

PREFERRED 700MHz BAND PLAN

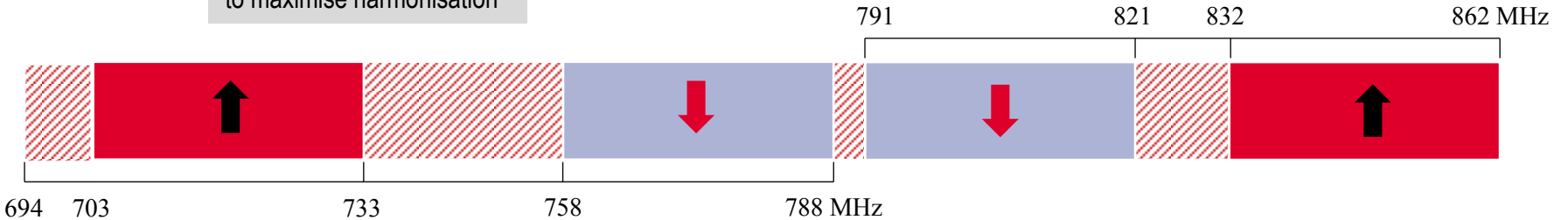


THE LOWER APT DUPLEXER IS THE BASIS FOR THE PROPOSED 700MHz REGION 1 BAND PLAN



PREFERRED REGION 1 700 MHz BAND PLAN
2x30 MHz (approved by CEPT)

Alignment of the band plan and the technical conditions to maximise harmonisation



DIGITAL DIVIDEND 2

DIGITAL DIVIDEND 1

COMPATIBILITY OF 700MHz EQUIPMENT

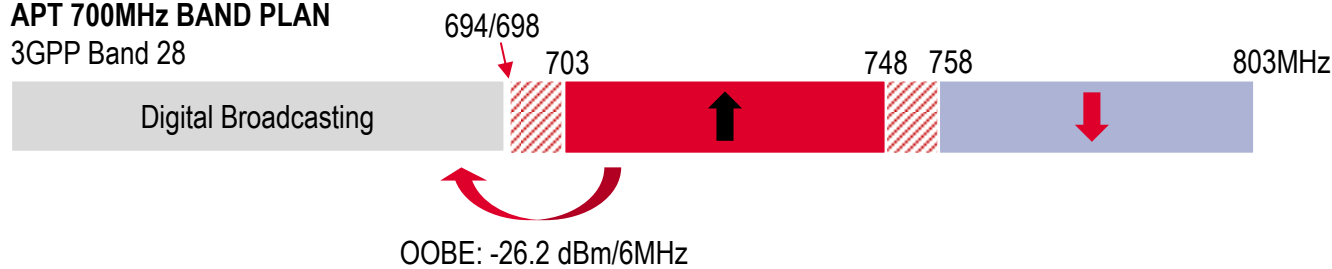


REGION 1 BAND PLAN EMISSION LIMITS MUST PROTECT BROADCASTERS BUT ALSO REMAIN COMPATIBLE WITH APT-700 DEVICES

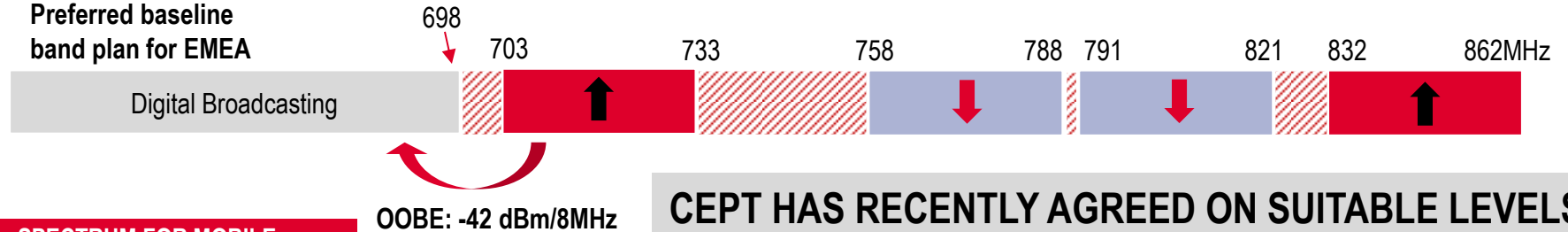
REGION 1 800 MHz BAND PLAN,
3GPP Band 20



APT 700MHz BAND PLAN
3GPP Band 28



**Preferred baseline
band plan for EMEA**

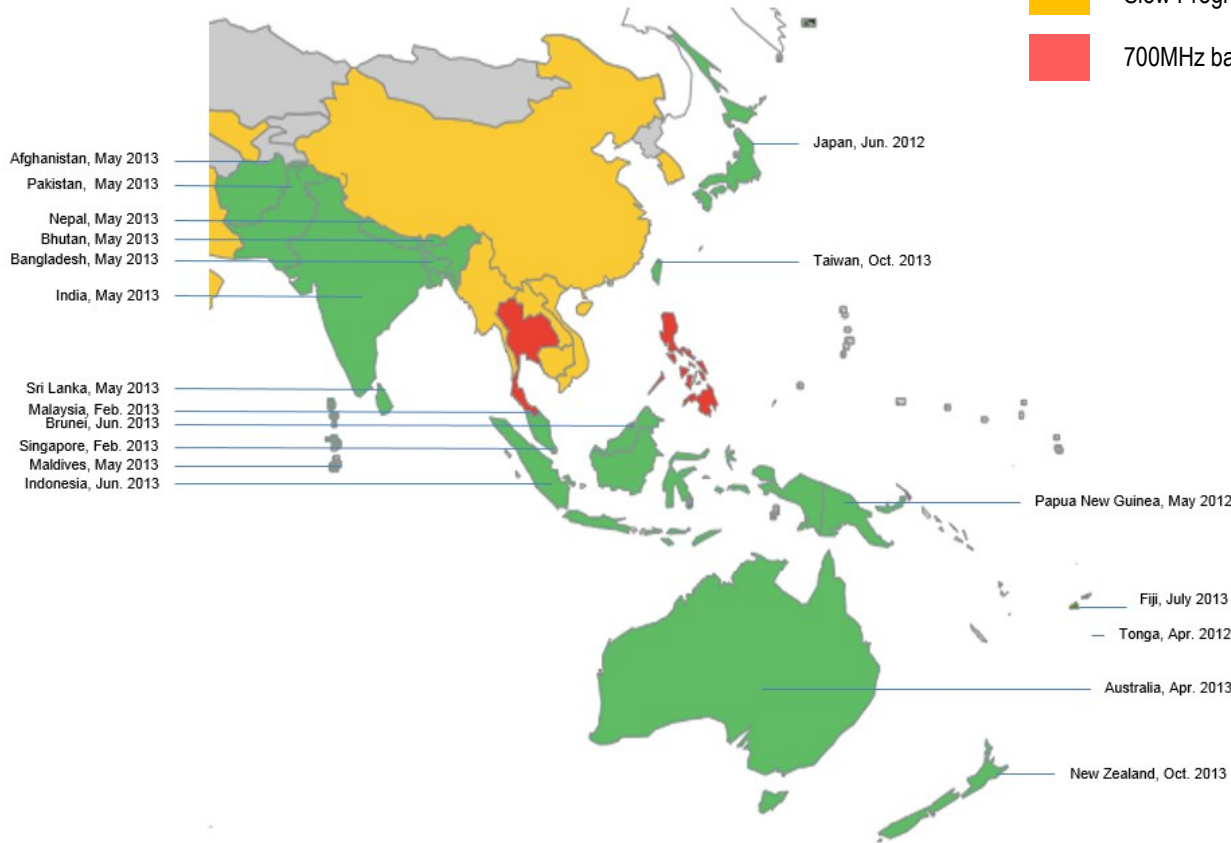
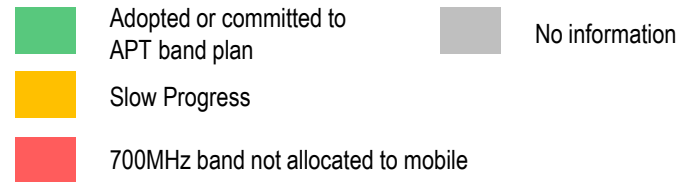


CEPT HAS RECENTLY AGREED ON SUITABLE LEVELS THAT ARE COMPATIBLE WITH APT 700 DEVICES

THANK YOU



APT 700 MOMENTUM IN ASIA PACIFIC



Adopted or leaning towards APT 700MHz band plan

✓	Afghanistan	30M
✓	Australia	23M
✓	Bangladesh	161M
✓	Bhutan	0.7M
✓	Brunei	0.4M
✓	India	1,2Bn
✓	Indonesia	249M
✓	Japan	127M
✓	Malaysia	29M
✓	Maldives	0.4M
✓	Nepal	30M
✓	Pakistan	190M
✓	Papua New Guinea	7M
✓	Singapore	5M
✓	Sri Lanka	21M
✓	Tonga	0.1
✓	Taiwan	23M
✓	New Zealand	4M

AND IN LATIN AMERICA

