

Experience of France for the transition from analog to digital TV and introduction of digital dividend

Situation in Martinique, Guadeloupe, Saint Martin, Saint Barthélemy and French Guyana

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07/05/2018



Description



Population of around 1 million of inhabitants in the entire area
35% of the population dependant on the terrestrial platform



From analog to digital : Introduction of digital



- The introduction of DTT has started on the **30th of November 2010** with on multiplex carrying 10 programs
- A **simulcast** period has been used in order to have a soft transition
- Discussions about the **duration** of the transition period in order to :
 - Be **long enough** : to provide time to the TV viewers to adapt their equipment
 - Be **short enough** : to avoid an important cost of the transition for the broadcasters
- **DVB-T/MPEG4** (64QAM-CR : $\frac{3}{4}$ - IG : $\frac{1}{8}$) Mixture of MFN and SFN – 8 MHz channel
- According to the decision of a meeting with neighbouring countries in Martinique, **no frequency above the 700 MHz** band will be used

Regulation of the receivers



- **Mandatory integration of DTT receivers :**
 - 1st of December 2007 :
 - All the TV and STB must be compatible with DTT programs (MPEG2)
 - 1st of December 2008 :
 - TV labelled “HD” must be compatible with HD programs (MPEG4)
 - PVR and STB labelled “HD” must be compatible with HD programs (MPEG4)
 - 1st of December 2009 :
 - All the TV screen below 66cm (26 inches) must be compatible with HD programs (MPEG4)
 - 1st of December 2012
 - All the TV screen below 66cm (26 inches) must be compatible with HD programs (MPEG4)
 - All the STB must be compatible with HD programs (MPEG4)
 - Label “HD” created in 2008 because...



≠



Analog switch off

- The analog TV switch off has set to the **29th of November 2011** for the entire area (one year approx for the simulcast)
- Organisation of a **communication campaign**
 - Information of all the levels : national/regional/local politics/vendors/general public...
 - Regional/local meetings
 - TV spot and panels
 - Documents distributed to the population
- Creation of a **help scheme**
 - For low income households
 - Help to payback the purchase of DTT Set Top Box (25 € maximum)
 - Help to upgrade or renew the antenna (120 € maximum)
 - For elderly (>70 years old) and/or disabled people (disability rate >80%)
 - Free service including on-site (at home) installation and channel scanning
 - For households out of DTT coverage
 - For all residents of « white areas », with no consideration for income
 - Help to pay back the rent or the purchase of any technical solutions to receive the DTT free channels (250 € maximum)

Quand allez-vous passer au tout numérique?

› Ile de France

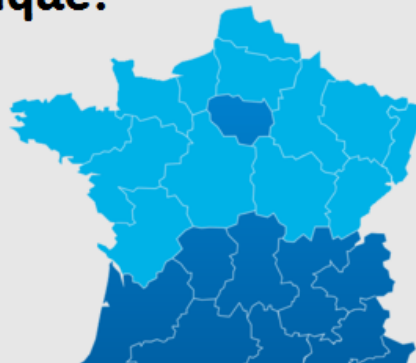
J-30 le 08 mars 2011

› Aquitaine

J-51 le 29 mars 2011

› Limousin

J-51 le 29 mars 2011



Êtes vous concerné ?

Par quel moyen recevez-vous
la télévision ?

- Une antenne râteau
- Internet ou le câble
- Une parabole
- Je ne sais pas

SUIVANT



« Adaptez ce poste pour recevoir la télévision numérique dès maintenant
et au plus tard le 8 mars, sinon vous ne recevrez plus la télé.

0970 818 818 (coût d'un appel local) ou www.tousaunumerique.fr »



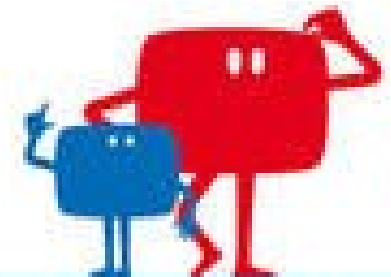
« Adapt this TV in order to receive Digital Television from now and by 8th of
March at the latest, if you do not do it, you will no more receive TV. 0970
818 818 (cost of a local call) or www.tousaunumerique.fr »



POUR PLUS D'INFORMATION, APPELER LE :

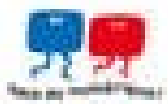
0 970 818 818 

du lundi au samedi de 8h à 21h (Prix d'un appel local)



**VOTRE RÉGION PASSE À LA TÉLÉ
TOUT NUMÉRIQUE**

Suis-je concerné(e) ?
Que dois-je faire ?





87.4% of the population



98.3% of the population

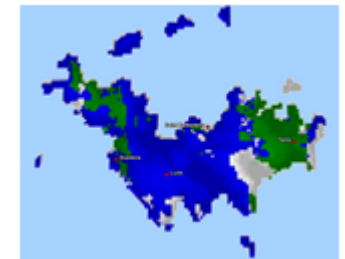
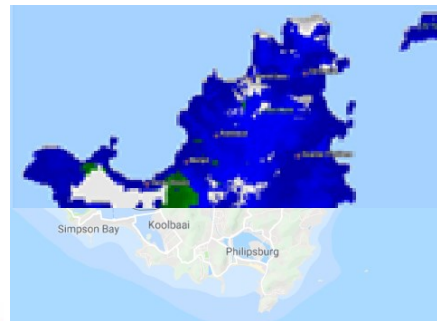


95.5 % of the population

Simplex Zouk TV en Martinique



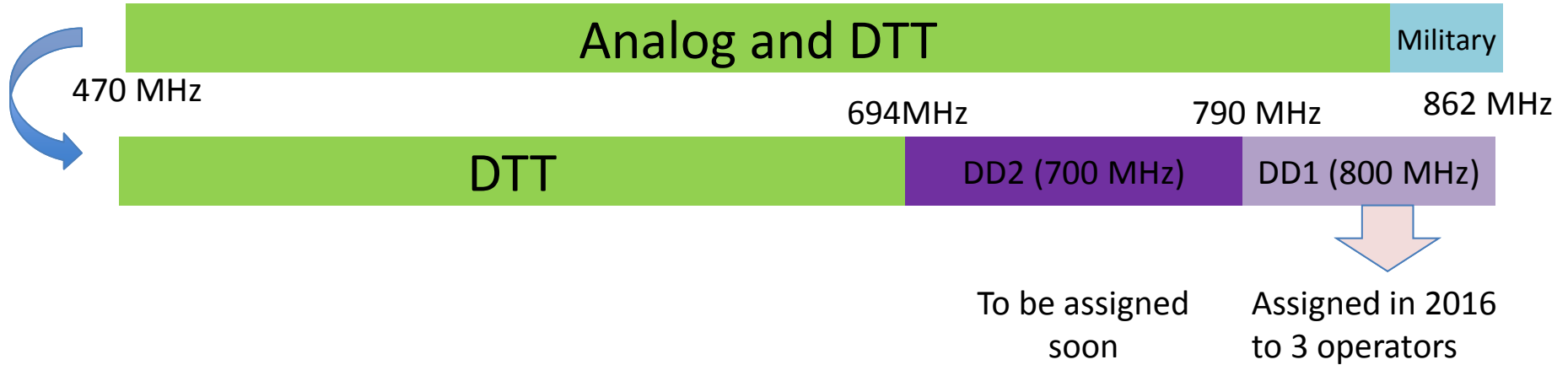
Saint Martin 95.6% of the population



Saint Barthélemy 95.6% of the population

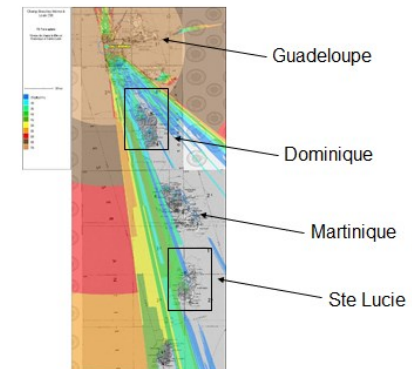
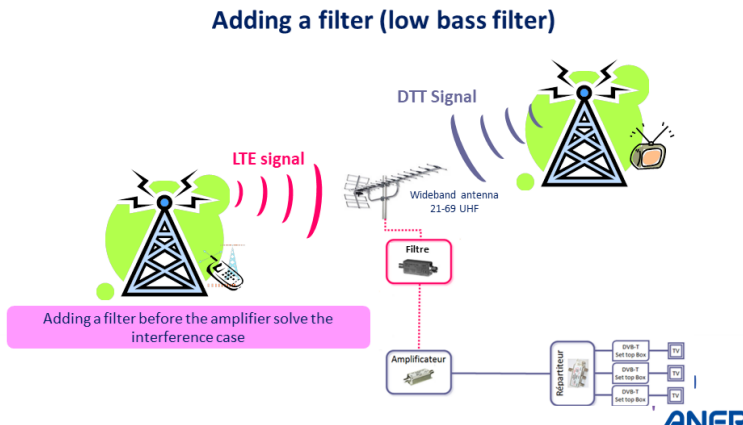


Digital dividend for mobile service

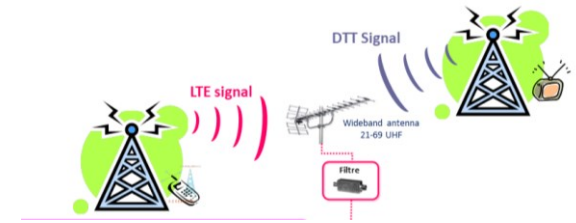


Deployment of **mobile** in DD bands must take into account :

- **DTT in adjacent band** (national issue)
- **Cochannel Mobile services** (international issue)



Situation of the 800 MHz band



- The **mobile operators** must solve the interference cases (in the **licence conditions**)
- Deployment of LTE 800 MHz has started in **2017**
- **Before** the deployment of a LTE base station the mobile operator must communicate towards the population and the municipal representatives
 - 7 days before the roll out, a flyer must be distributed to the households 200m around the station
 - Concrete technical details must be provided to the municipalities
- The complaints for a TV interference is received via the **ANFR**
- After technical calculations and studies about the date of the complaint, the responsible mobile operator is **identified** and contacted
- The mobile operator has a maximum delay of **5 days** to intervene
- More information available with the following [document](#)

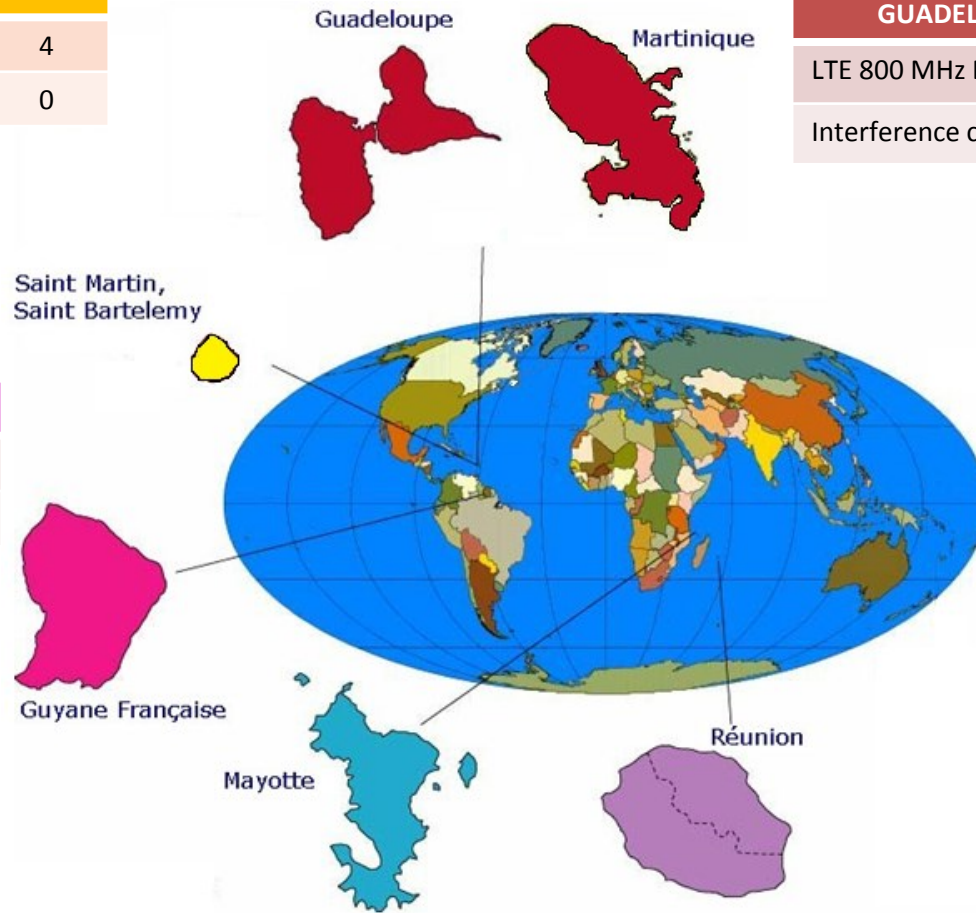
Some figures...

ST-MARTIN, ST-BARTHELEMY

LTE 800 MHz BTS	4
Interference cases	0

GADELOUPE - MARTINIQUE

LTE 800 MHz BTS	305
Interference cases	21



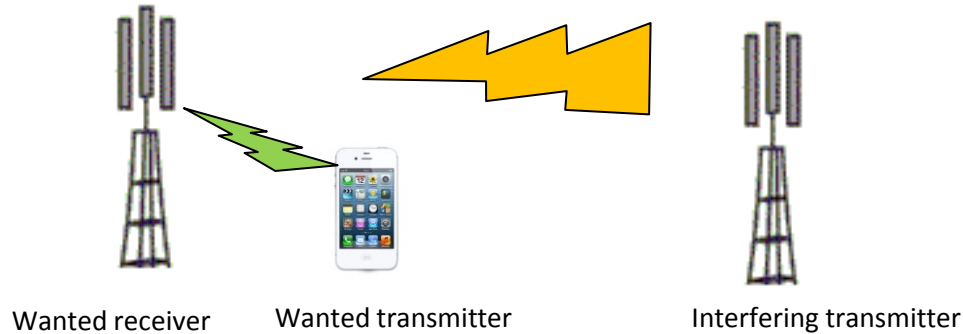
FRENCH GUYANA

LTE 800 MHz BTS	69
Interference cases	3

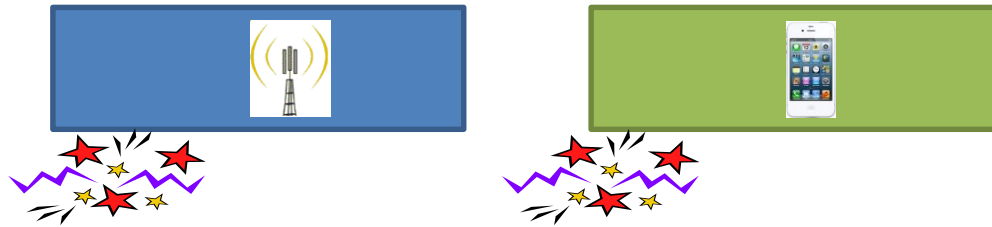
Mobile service



- Use of different frequency **plans** in neighboring administrations may lead to potential cross border interferences when uplink and downlink are used on the same frequency band



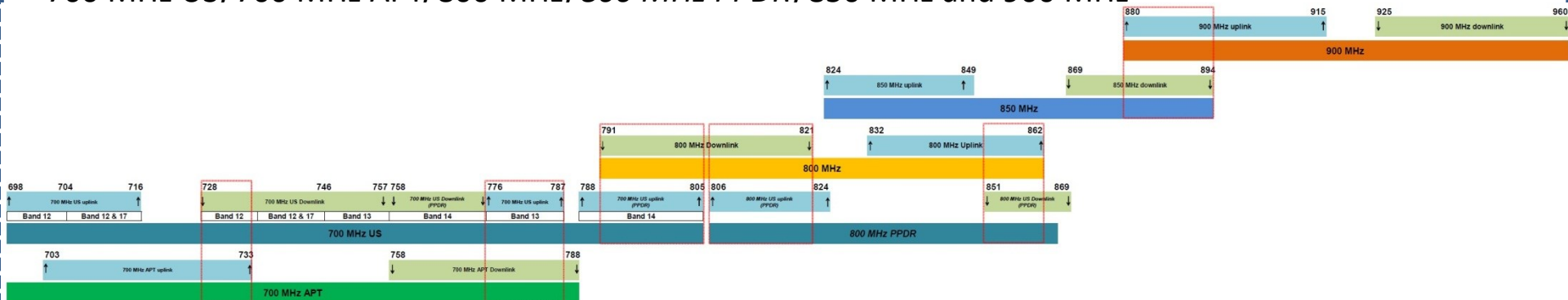
Plan A



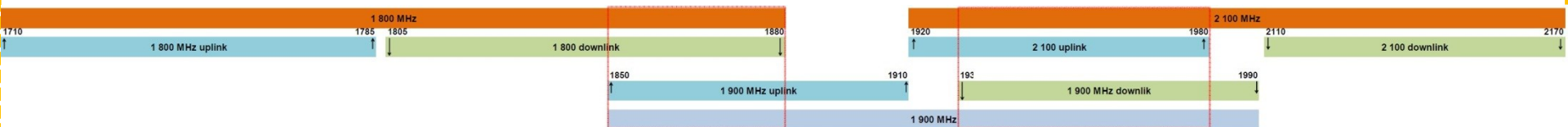
Plan B



700 MHz US, 700 MHz APT, 800 MHz, 800 MHz PPDR, 850 MHz and 900 MHz



1 800 MHz, 1 900 MHz and 2 100 MHz

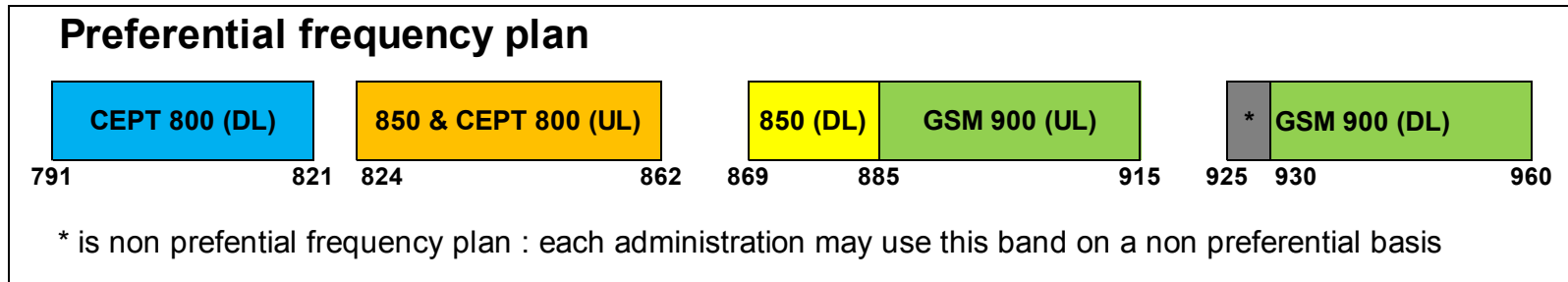


List of incompatibilities

From (MHz)	To (MHz)	Bandwidth (en MHz)	Uplink Plan	Downlink Plan
728	733	5	700 MHz APT	700 MHz US band
776	787	11	700 MHz US Band 13	700 MHz APT
791	805	14	700 MHz US PPDR Band 14	800 MHz
806	821	15	800 MHz US PPDR	800 MHz
851	862	11	800 MHz	800 MHz US PPDR
880	894	14	900 MHz	850 MHz
1850	1880	30	1 900 MHz	1 800 MHz
1930	1980	50	2 100 MHz	1 900 MHz

Coordination of the mobile service

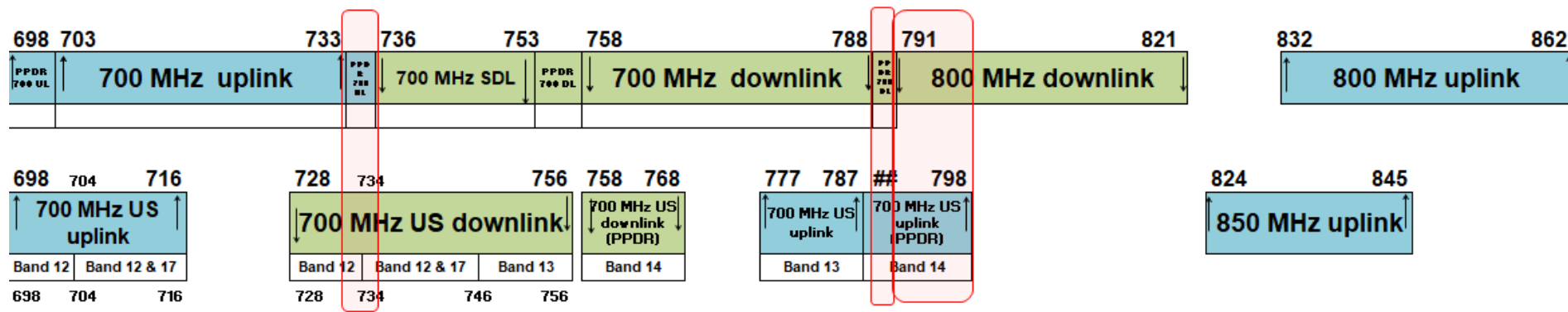
- **Example** of the agreed approach



- Both administrations has the possibility to **use all the spectrum**
- A station using **preferential** plan can be deployed with typical parameters
- A stations using **non preferential** frequency plan can be deployed if the interference field strength to the other administration is low enough and have to support the interference coming from a station using preferential plan
- Under this concept , agreement
 - has been **signed** with Anguilla, Sint Maarten, Saba and St Eustasius
 - is in **under discussion** with Antigua and ECTEL countries

PPDR situation

- The last pending issue for the finalization of cross border agreements with some administration is the situation of **PPDR** services using the 700 MHz band



- For the CEPT plan equipment available only yet for the **2x3 MHz**
- CEPT PPDR and 800 MHz facing the Uplink of the band 14 and Uplink of CEPT PPDR facing the band 12
- The **IRMA** event made necessary the coordination of the use of PPDR services in case of emergency.
- Discussion to be continued on that subject

Digital sound broadcasting

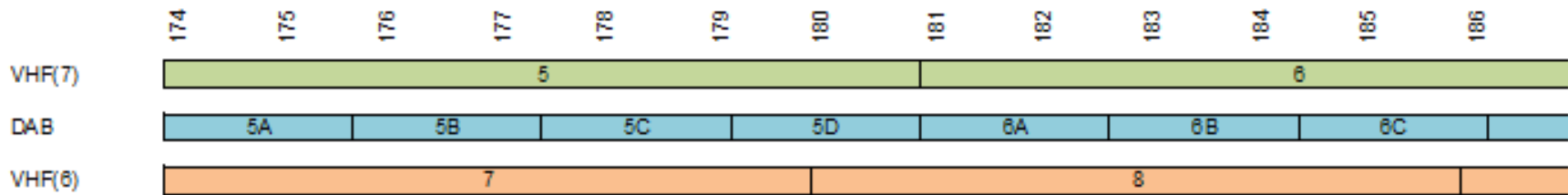


- From our experience DSB is difficult to be compared with DTT
 - FM switch off and 95% of coverage for DSB have the **reluctance** of the main programs (public and private)
 - A new approach consists in the coverage of the main **cities** and the main **roads** as a first step and be considered as a **commentary** platform than the FM band
- Adopted standards :
 - TDMB
 - TDAB
 - TDAB+
- Use of the VHF band (174-230 MHz)
- One bloc use 1.75 MHz for 10 to 12 radio programs
- Launch in a few cities in France metropolitan area (started in 2007) and a new time schedule and licence process
- Licences distributed to each radio programs which have to constitute a multiplex operator (unanimity is expected)



How to coordinate DSB in this exercise ?

- In order to avoid different channel rasters and introduce complexity, France is coordinating TV channels of **6 MHz** bandwidth in order to have the possibility to deploy **3 DSB channels**



- Date for the time being **unknown** for the roll out of **DSB** in this area but could be quick depending on the **success** of the situation in the metropolitan area

Thank you for your attention

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