








Introduction of 3G Mobile services in Mauritius



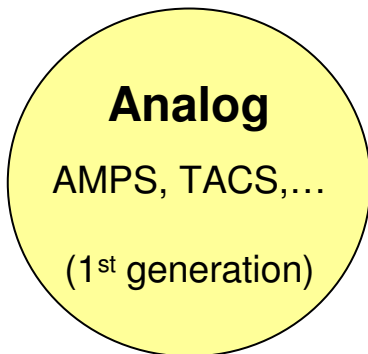
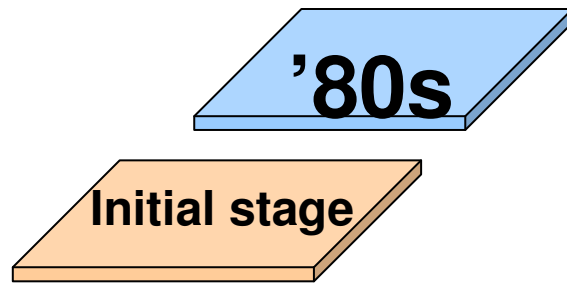
This Session

-  **Introduction**
-  **International Mobile Telecommunication – 2000 (IMT-2000) – 3G**
-  **Spectrum Consideration for IMT-2000**
-  **Demand for 3G Services**
-  **Regulatory Considerations for 3G**
-  **Proposals of the ICT Authority**
-  **Conclusion**

Introduction

- 1986 – ITU began work on developing FPLMTS
- 1994 – FPLMTS renamed IMT-2000
- 2000 – ITU completed recommendation ITU-R M.1457 (radio interfaces for IMT-2000)
- IMT-2000: a flexible set of standards that allows operators the freedom of radio access methods and core networks.
- *The full economic and social potential of access to IMT- 2000 for everybody and everywhere depends largely on the global harmonized allocation allowing economies of scale in product development thus reducing the overall terminal and infrastructure costs*

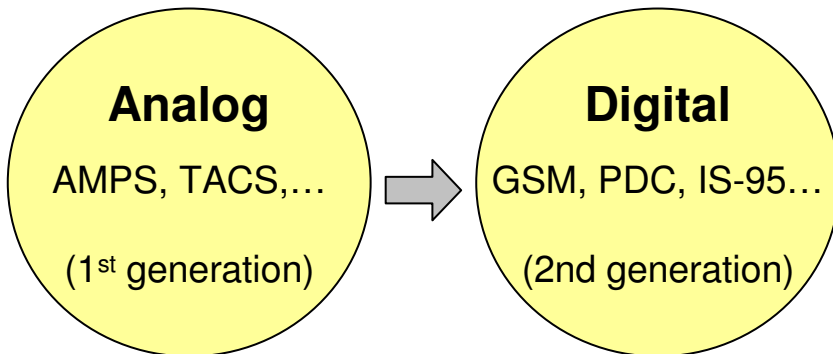
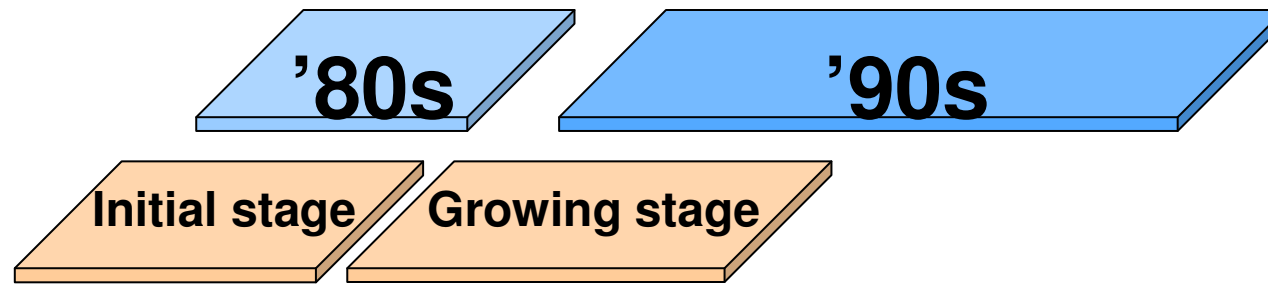
Introduction - Evolution of Mobile



Mobile < 300 bps
Data

PSTN 28.8 kbps
Data

Introduction - Evolution of Mobile



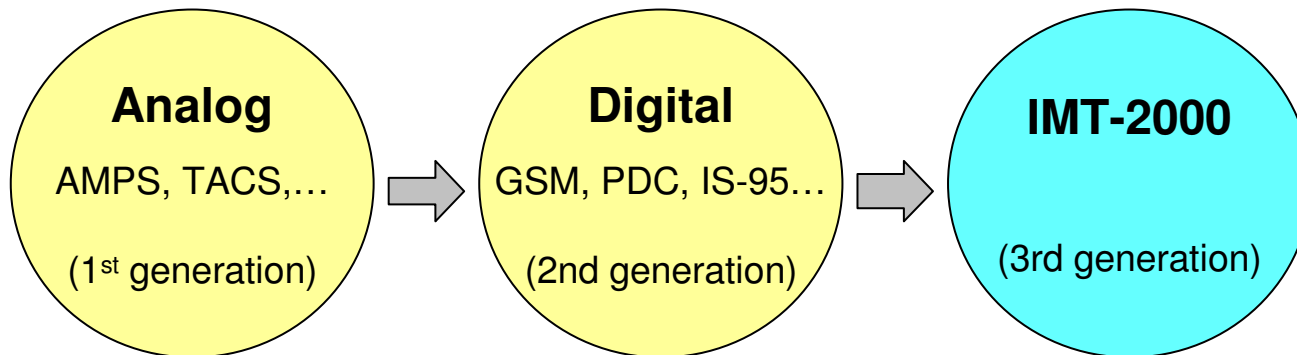
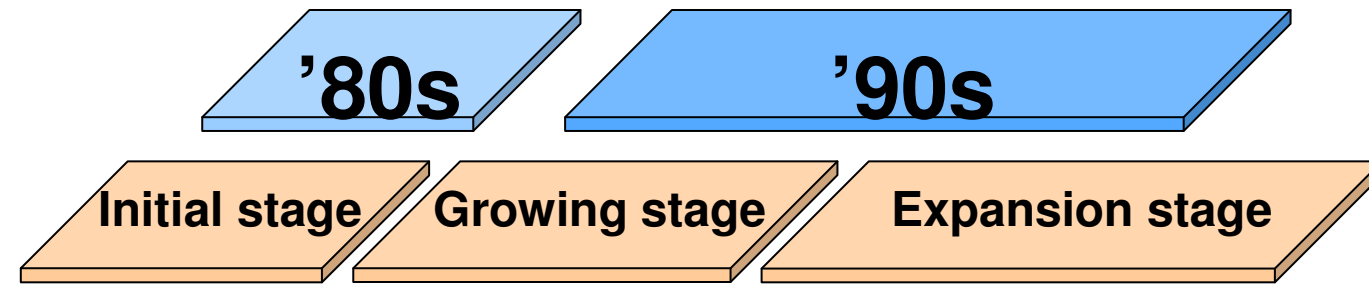
Mobile Data < 300 bps

9.6 k – 64 kbps (packet)

PSTN Data 28.8 kbps

64 kbps

Introduction - Evolution of Mobile



Mobile Data < 300 bps

9.6 k – 64 kbps
(packet)

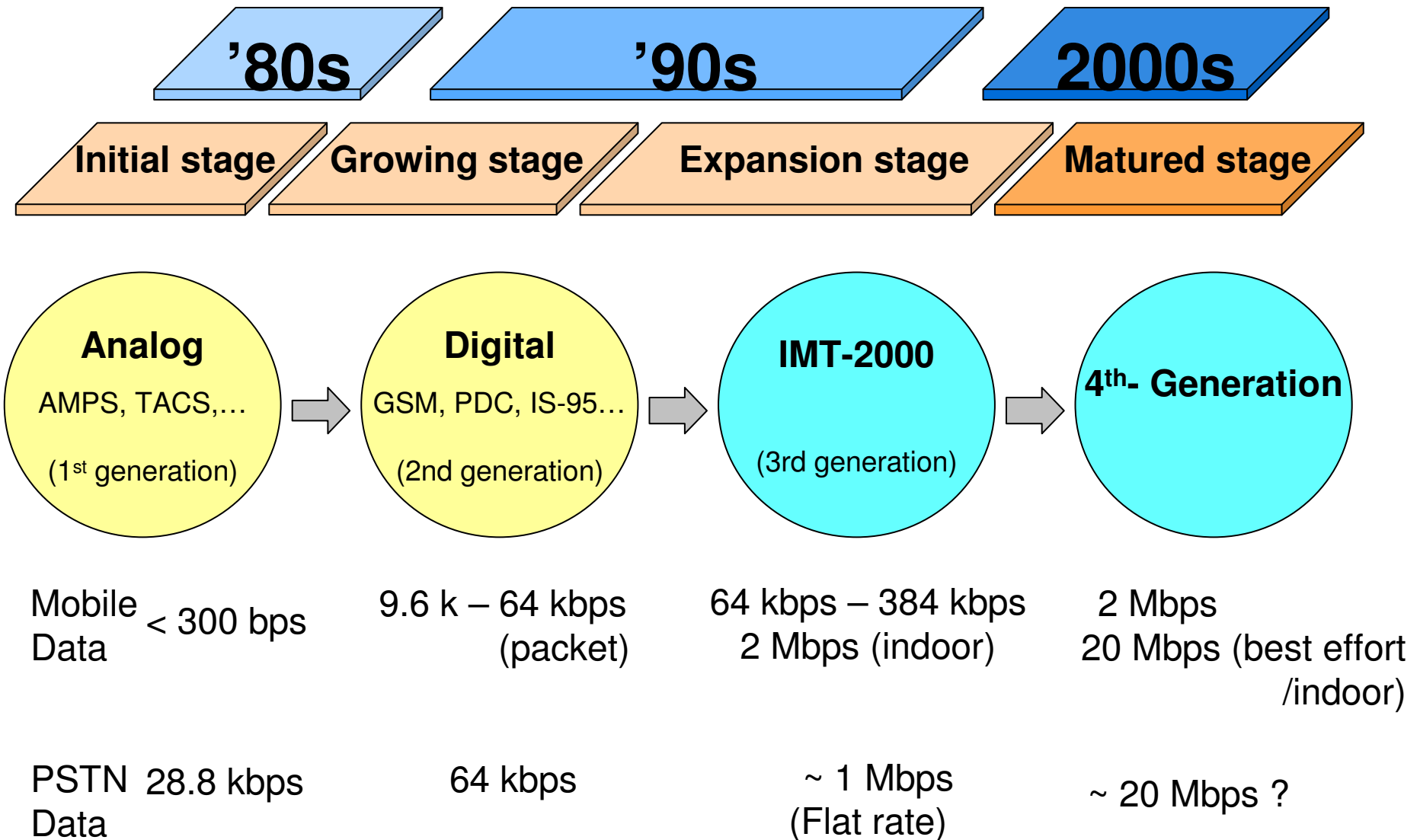
64 kbps – 384 kbps
2 Mbps (indoor)

PSTN Data 28.8 kbps

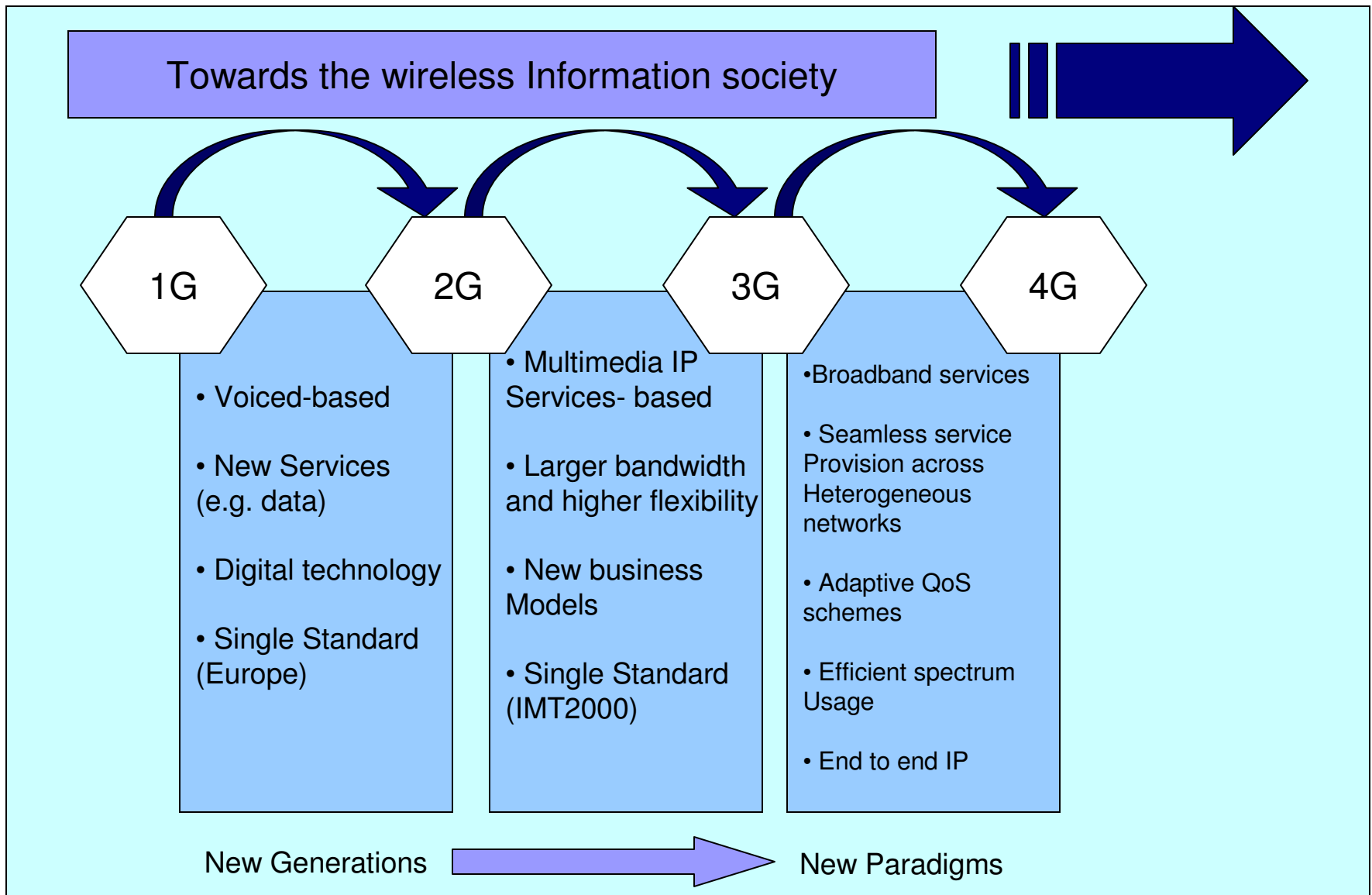
64 kbps

~ 1 Mbps
(Flat rate)

Introduction - Evolution of Mobile



3G and beyond Services



International Mobile Telecommunication – 2000 (IMT-2000) – 3G

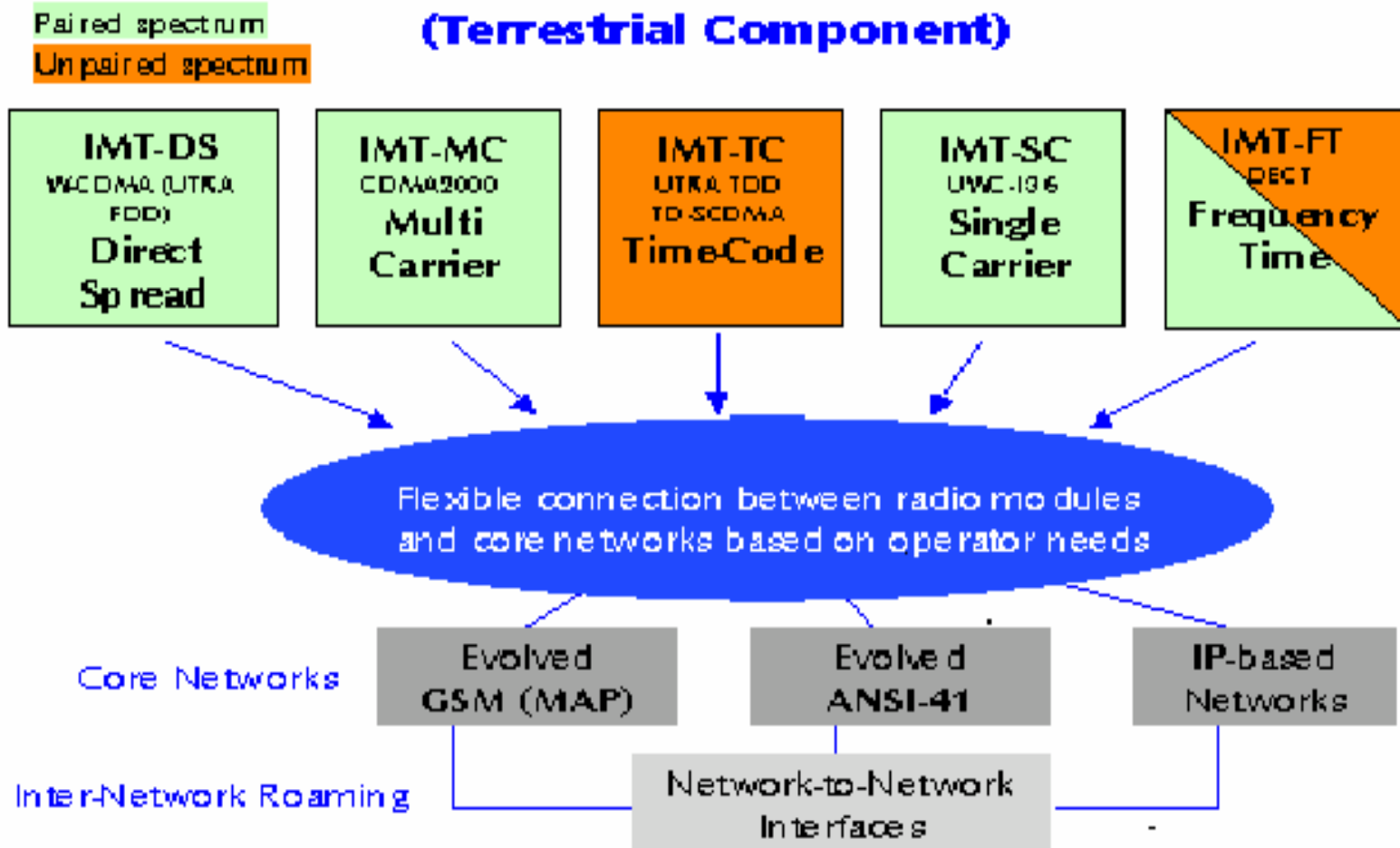


Full name	Common names
IMT-2000 CDMA Direct Spread	UTRA FDD WCDMA UMTS
IMT-2000 CDMA Multi-Carrier	CDMA2000 1x and 3x CDMA2000 1xEV-DO CDMA2000 1xEV-DV
IMT-2000 CDMA TDD (time-code)	UTRA TDD 3.84 Mchip/s high chip rate UTRA TDD 1.28 Mchip/s Low chip rate (TD-SCDMA) UMTS
IMT-2000 TDMA Single-Carrier	UWC-136 EDGE
IMT-2000 FDMA/TDMA (frequency-time)	DECT

International Mobile Telecommunication – 2000 (IMT-2000) – 3G

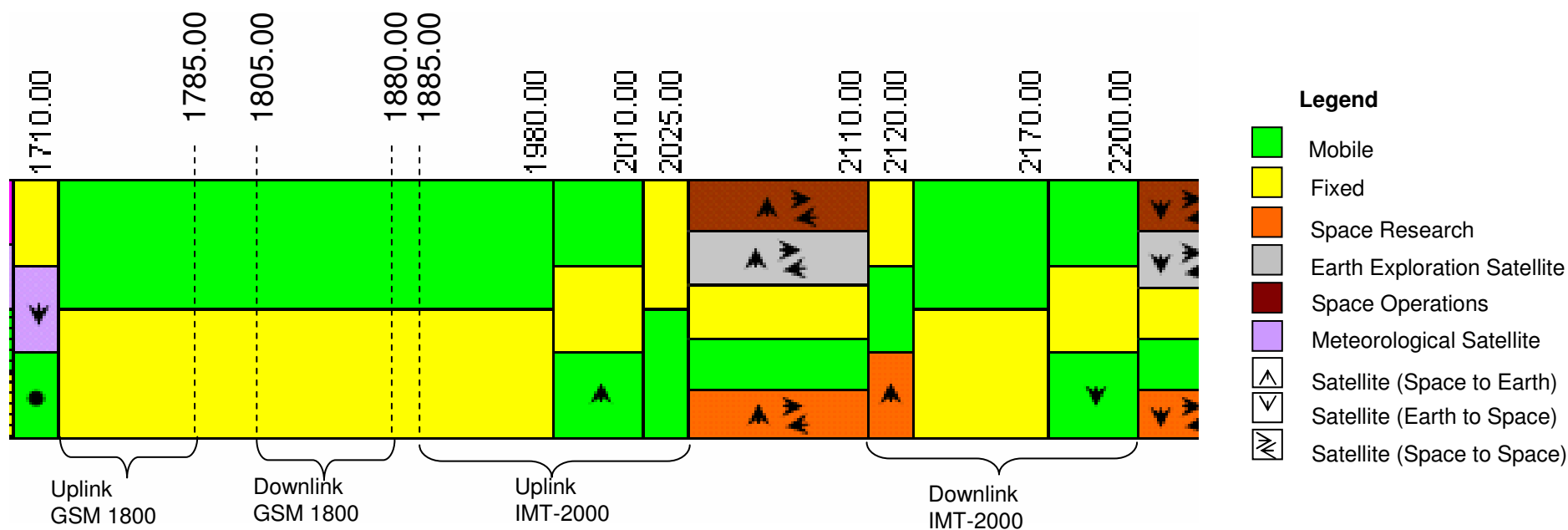


Modular IMT-2000 Harmonization (Terrestrial Component)



Spectrum Consideration for IMT-2000

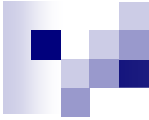
- ITU Radio Regulations Article RR S5.388 allocates the bands 1 885-2 025 MHz and 2 110-2 200 MHz



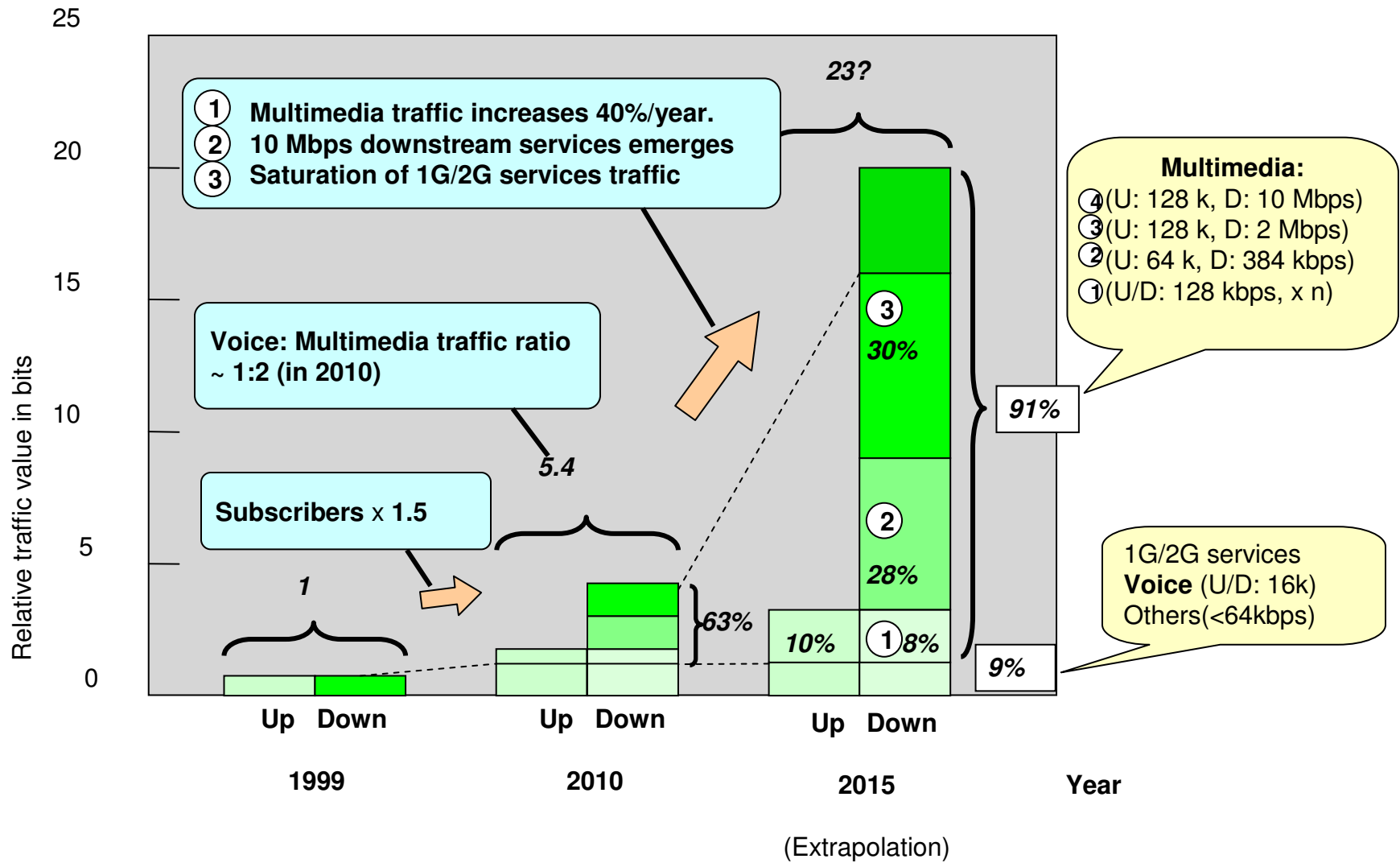
Demand for 3G Services



Country	Operator	Number of Subscribers as at January 2004
Japan	DoCoMo	2,014,000
Japan	Vodafome KK	123,000
Australia	Hutchison	109,000
Italy	Hutchison	376,000
UK	Hutchison	321,000
Sweden	Hutchison	26,000
Denmark	Hutchison	8,000
Austria	Hutchison	13,000
Austria	Mobilkom	2,000



Demand for 3G Services



Regulatory Considerations for 3G

- **Spectrum licensing model to be adopted**
- **Standardization Issues**
- **Licensing Issues**
- **Scope of Service**
- **The time scale for 3G introduction**

Proposals of the ICT Authority



■ Spectrum Consideration

□ *Considering that:*

- Note 5.388 of the RR states that, *“The bands 1 885-2 025 MHz and 2 110-2 200 MHz are intended for use, on a worldwide basis, for IMT-2000.*
- Resolution 212, resolves that:-
 - Administrations which implement IMT-2000:
 - should make the necessary frequencies available for system development;
 - should use those frequencies when IMT-2000 is implemented;
 - should use the relevant international technical characteristics, as identified by ITU-R and ITU-T Recommendations.



Proposals of the ICT Authority

- part of the IMT-2000 frequency band has been assigned to fixed services in Mauritius .
- *The Authority proposes to:*
 - undertake a spectrum re-farming exercise, pursuant to ITU-R Rec. SM 1047-1, in order to make available spectrum for IMT-2000 .



Proposals of the ICT Authority



■ Licensing issue

□ Considering that:

- The Licensing and Fees Regulation of 2003 sets out the scope and licence fees payable for PLMN, amongst other licenced activities;
- The licence fee payable for the use of spectrum is set out in the same regulation;
- Licences have been defined to be technology-neutral.



Proposals of the ICT Authority

- The ICT Authority proposes to:
 - apply the licensing regime currently in force in Mauritius for 3G services;
 - consider 3G systems as being an evolution of current mobile networks, and thus falling under the scope of the existing PLMN licence;
 - apply the spectrum fees as currently obtained under SPL.2 of the Licensing and Fees regulation of 2003 for IMT-2000 spectrum usage.

Conclusion

- IMT-2000: a flexible set of standards that allows operators the freedom of radio access methods and core networks
- ITU Radio Regulations Article RR S5.388 allocates the bands 1 885-2 025 MHz and 2 110-2 200 MHz
- **Spectrum Consideration:** undertake a spectrum re-farming exercise, pursuant to ITU-R Rec. SM 1047-1, in order to make available spectrum for IMT-2000
- **Licensing issue:**
 - apply the licensing regime currently in force in Mauritius for 3G services;
 - consider 3G systems as being an evolution of current mobile networks, and thus falling under the scope of the existing PLMN licence;
 - apply the spectrum fees as currently obtained under SPL.2 of the Licensing and Fees regulation of 2003 for IMT-2000 spectrum usage

Consultation process highlights

- **Consultation paper on the implementation of 3G Mobile in Mauritius**
- Consultation Document Ref 2004/2
- Electronically available @ <http://www.icta.mu>
- Views, contributions, and comments on the Consultation Document, to be sent to the **Chairman, ICT Authority, Jade House, Remy Ollier street, Port Louis**, or by email to icta@intnet.mu, at latest by 31st July 2004

Thank you for your attention



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