



# **Simple Set-top Boxes Key Performance Criteria**

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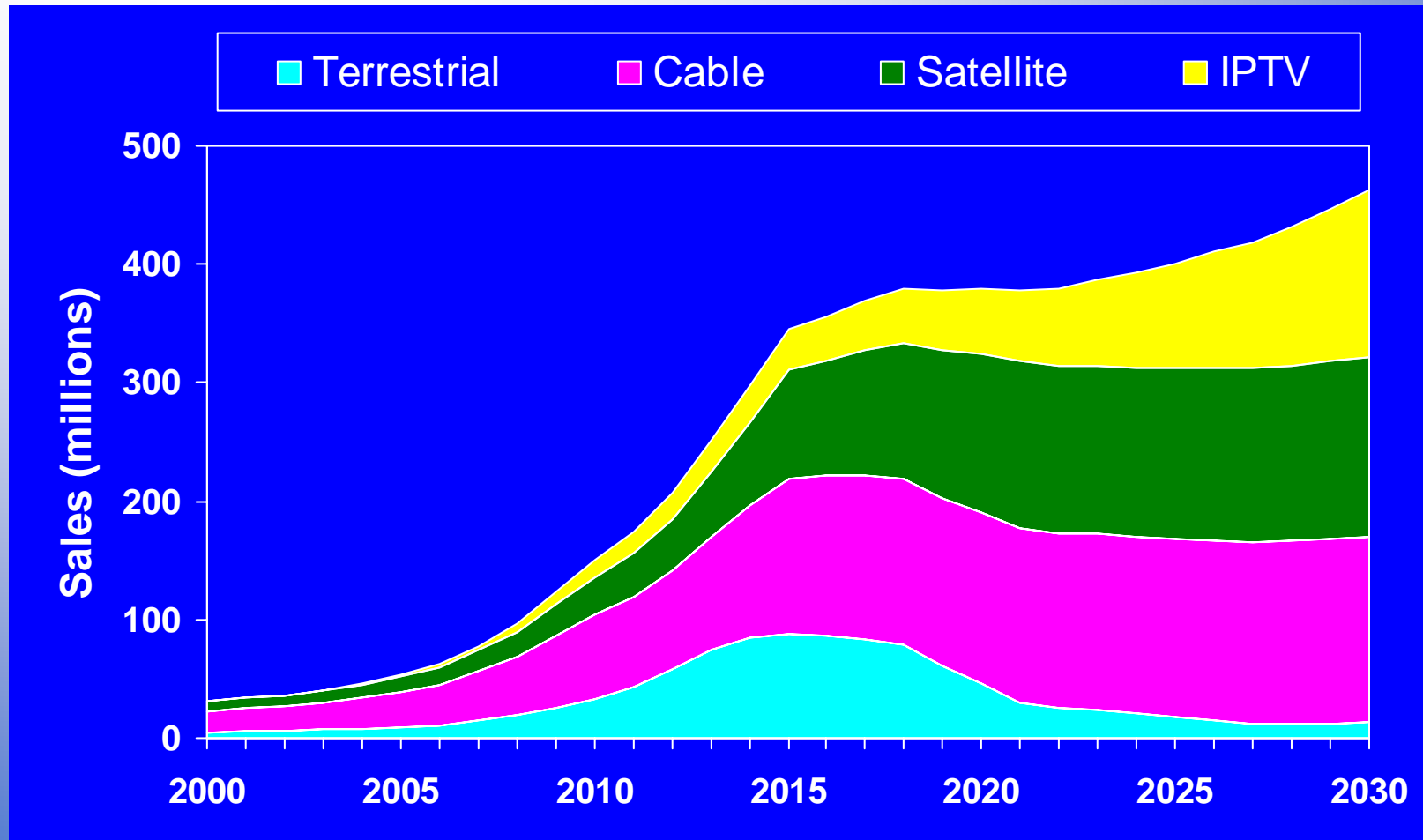


## Why bother about simple STBs?

- Aren't 'simple' boxes a thing of the past?
- The market moving to boxes with conditional access and other features
- BUT.....
  - ◆ *Markets outside EU and USA*
  - ◆ *Client or slave boxes*
  - ◆ *Sales predictions still significant in near future*

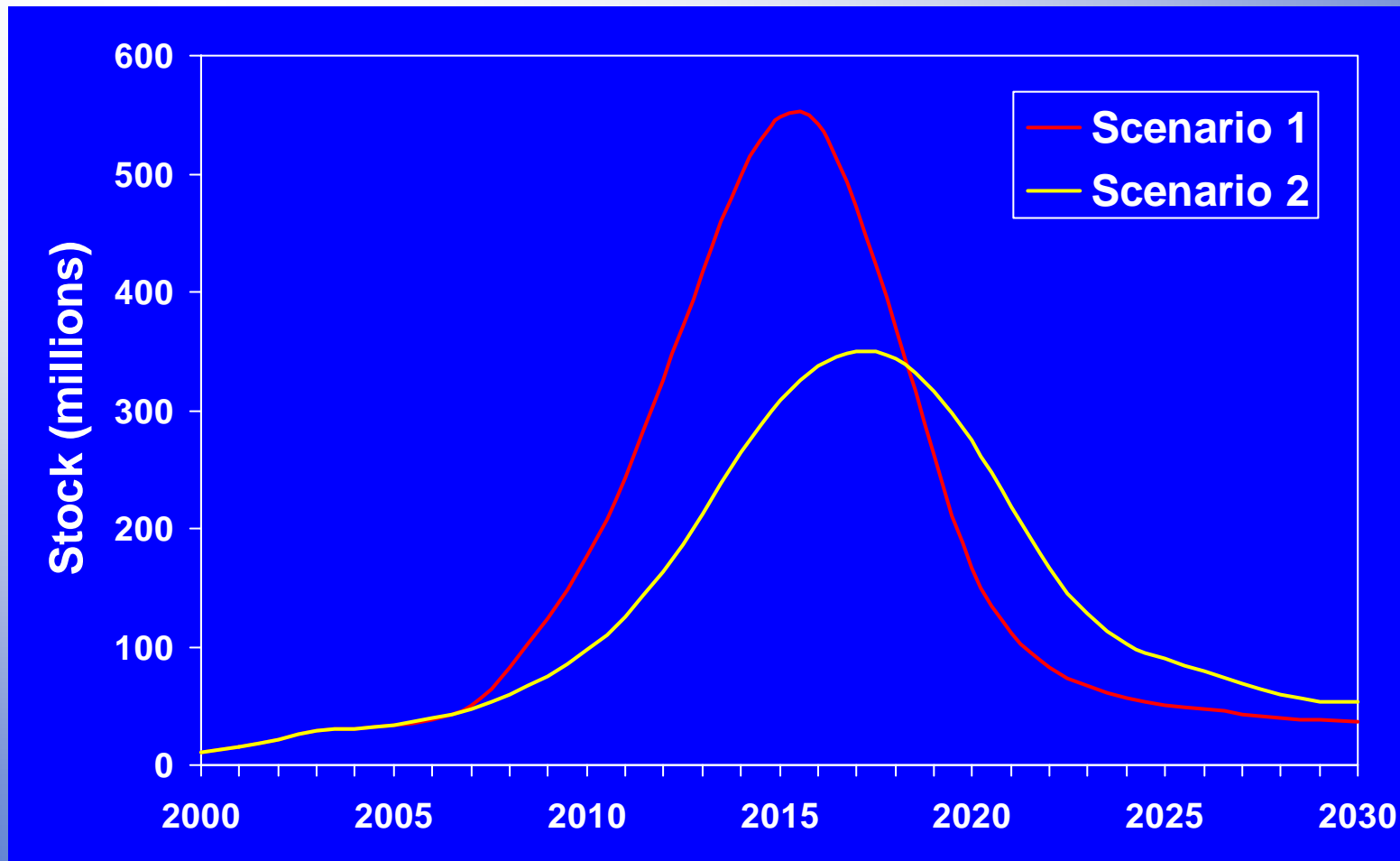


# Global Sales – all STB



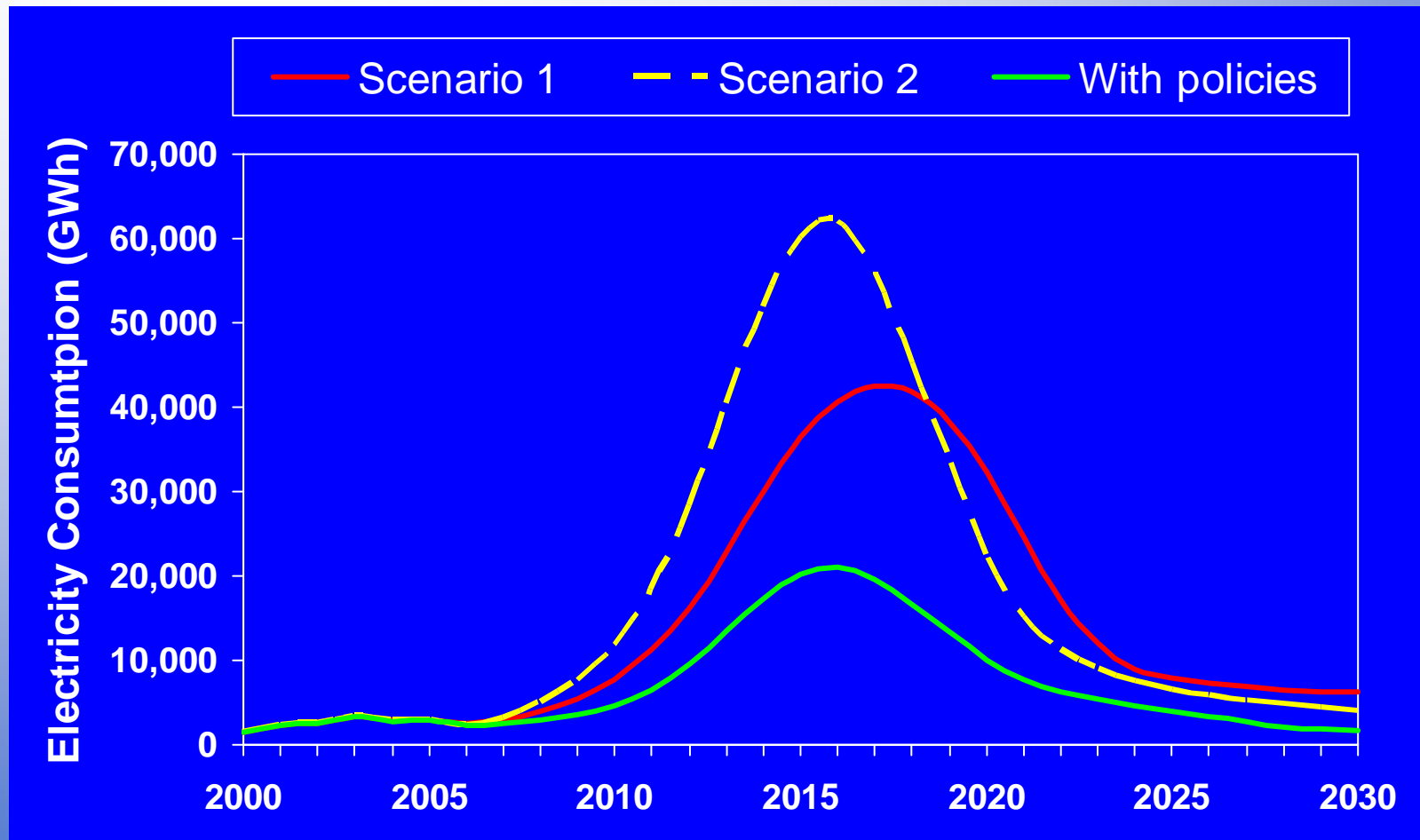


# STB Stock – simple STB





# Electricity consumption





# Summary

- Technically possible to make 'simple' STB with relatively low energy consumption levels
- Will the market move adopt these technologies autonomously?
  - ◆ *Highly price competitive at the low end*
  - ◆ *R & D focused on products with more functionality*
- Several 'model' programmes designed to pull or push the market
- Adequate test methodologies
- Fair degree of harmonisation of specifications
  - ◆ *Different markets/different products*



# Opportunity

- **Significant sales up to 2015-2018 in most markets**
  - ◆ *Roll-out of Digital TV*
  - ◆ *Emerging markets, Asia, Africa, Sth America*
- **Savings to be made by encouraging best practice**
  - ◆ *But will need pro-active steps*
- **Many Countries already have policy aspirations**



## What do specifications contain?

- **Energy performance requirements**
    - ◆ *Most cover all relevant modes*
    - ◆ *Some passive standby only*
  - **Test standards**
    - ◆ *Repeatability and reproducibility*
  - **Relevant programme conditions:**
    - ◆ *Product registration/reporting*
    - ◆ *Labeling (if any)*
    - ◆ *Compliance*
    - ◆ *Penalties*
- } Specific to each programme



## Energy performance requirements

**STB generally required to:**

- ◆ meet requirements in *BOTH* passive standby (sleep) and On mode
- ◆ Auto-power down to lowest power level after time with no user input (factory default)



## 2007 typical policy requirements for simple STB - all platforms

	Passive standby (sleep)	On SD decoding	On HD decoding
Minimum	2 W	8 W	14 W
Best	1 W	7 W	8 - 11 W

Plus 4.5W for internal hard  
disc and additional tuner



## Questions?

- What would we recommend for an off-the-shelf specification today?
- Can we achieve lower power levels?
  - ◆ *Where are there more power management opportunities?*