Draft proposal for a '1-hour' auto-standby function for STB
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Auto-standby presentation overview

- ➲ **Purpose**

- ➲ **Problems**
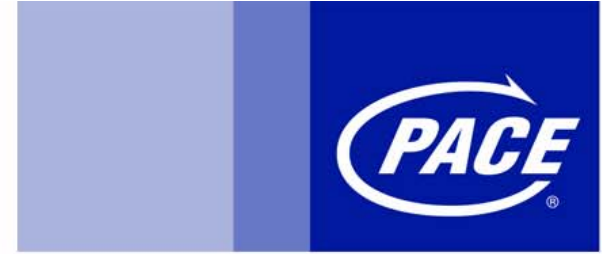
- ➲ **Proposal**
    - • **Timing**
    - • **Informing**
    - • **Delaying**
    - • **Defeating**

- ➲ **Philosophy**

- ➲ **Progression**

- ➲ **Postscript**

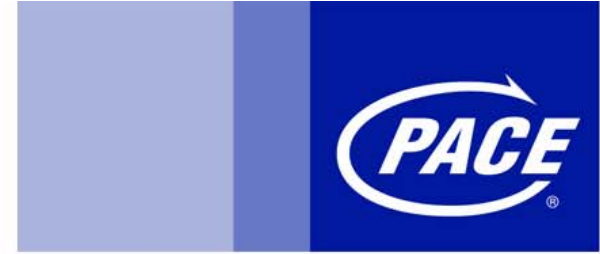Pace HDTV PVR

Purpose of this proposal

- **To maximise energy efficiency**
  - Ensuring that the product actually goes into standby

- **To address operational issues**
  - Minimising any user inconvenience

- **To suggest a standard approach for auto-standby**
  - Helping user familiarity
  - Providing an intuitive interface

- **To encourage the wide adoption of auto-standby in STB**

I am grateful for inspiration from others for this proposal

This is a discussion document to be modified so we can refine the auto-standby technique
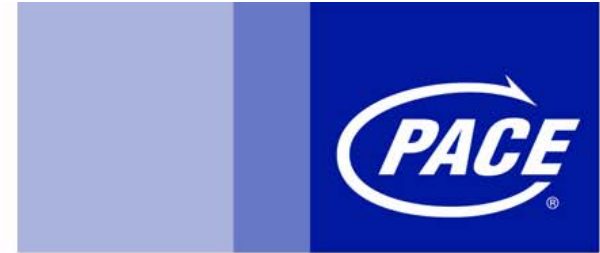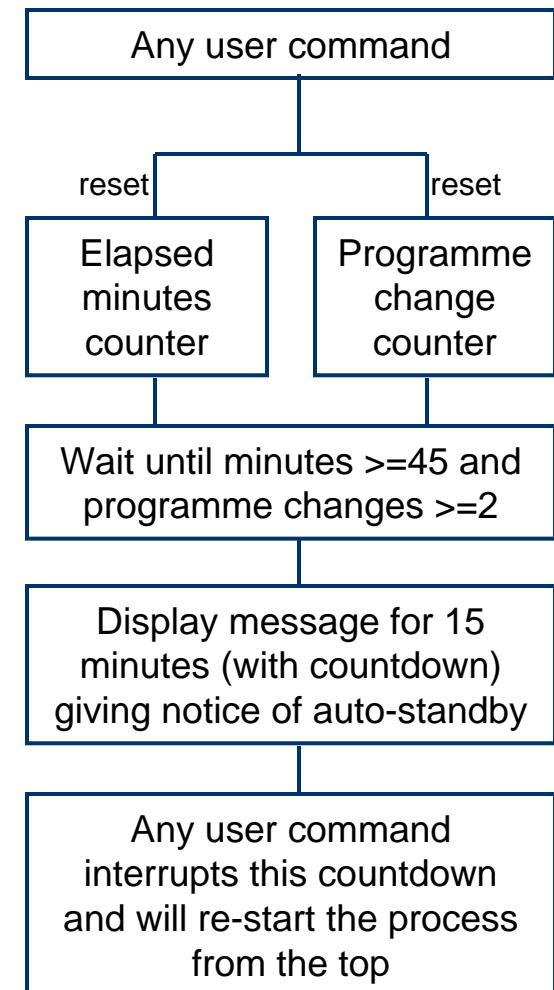
The problems being addressed

⮑ **Energy use by consumer electronics is rising**

⮑ **There are a number of proposals world-wide to set limits for standby power**

⮑ **Surveys show that some 60% of people never put STB/VCR equipment into the standby mode**

⮑ **Problem is in knowing when the STB is not actually in use**

- **Continual input signals**
- **Variety of devices connected to outputs**
- **No communication from display devices**

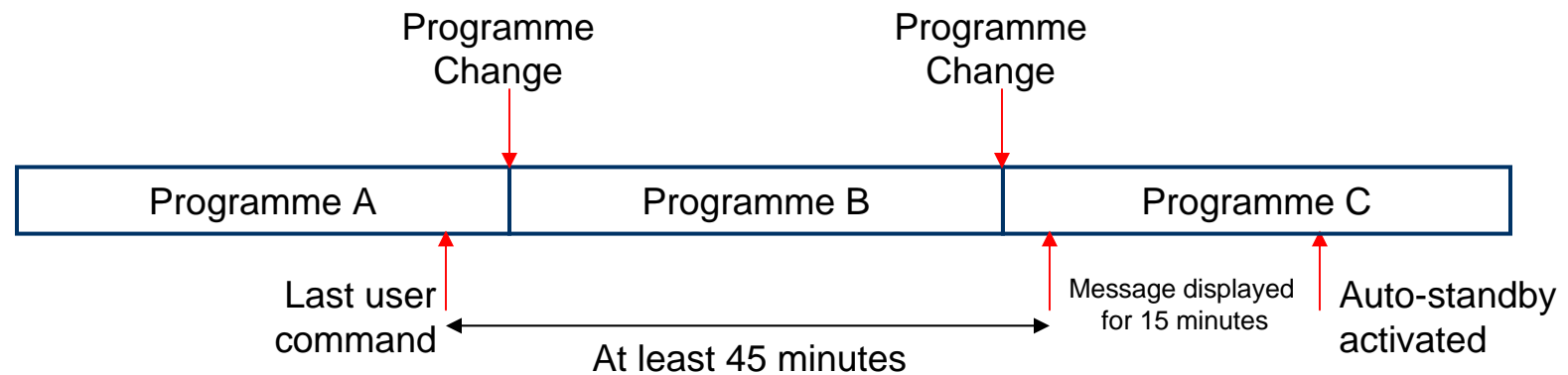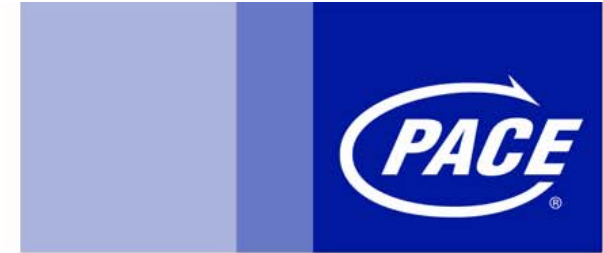⮑ **Product intelligence is needed to automatically activate standby**

Proposal – Timing

- Count the time since the last user command

- Count changes of transmitted programme since last user command

- When at least 45 minutes have elapsed and there have been 2 or more programme changes since the last user command, display a warning message for 15 minutes before going into auto-standby

- Any user command will re-start the '1-hour' auto-standby sequence

Any user command

reset		reset

Elapsed minutes counter	Programme change counter

Wait until minutes >=45 and programme changes >=2

Display message for 15 minutes (with countdown) giving notice of auto-standby

Any user command interrupts this countdown and will re-start the process from the top

Proposal – Timing example

Programme Change   Programme Change

Programme A	Programme B	Programme C

Last user command
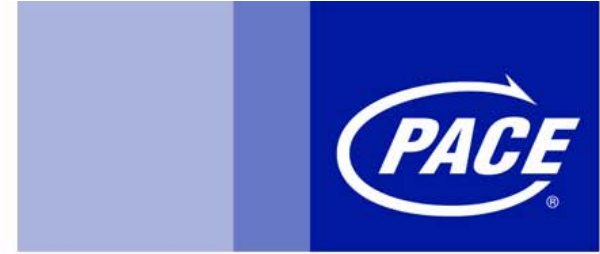
Message displayed for 15 minutes

Auto-standby activated
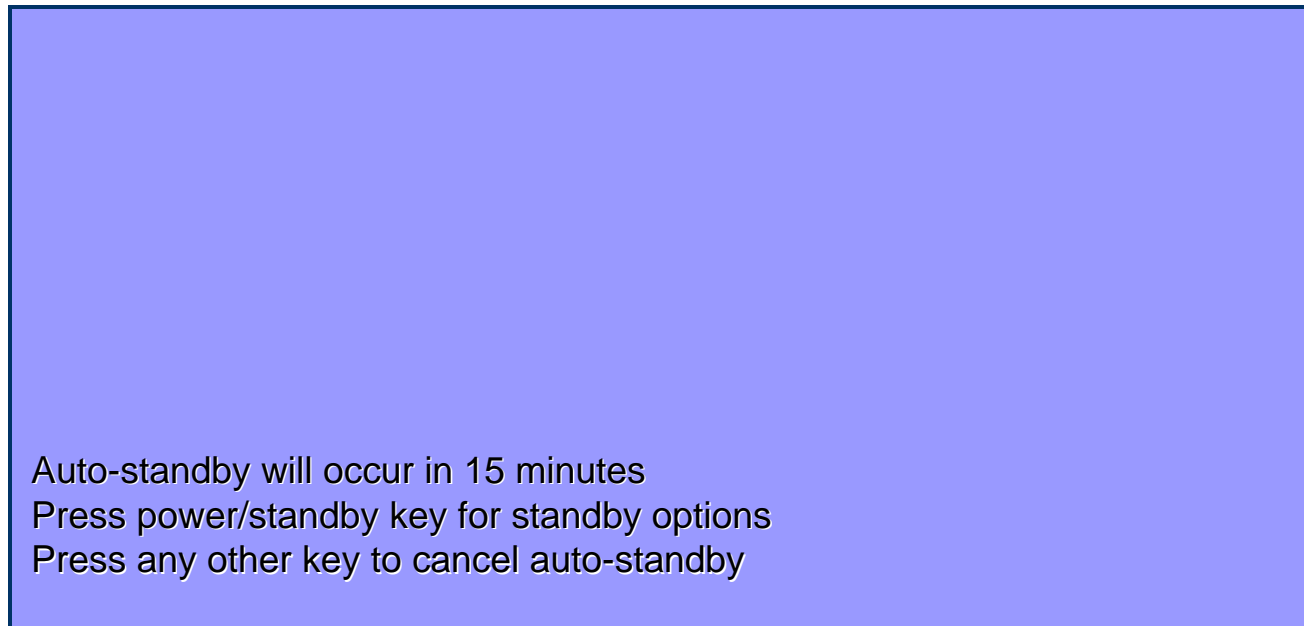
At least 45 minutes

➲ **To minimise inconvenience to the user, the next transmitted programme since the last user command will not be interrupted**

➲ **It will be a minimum of 1 hour from the last user command before auto-standby occurs**

➲ **There will be a 15-minute warning before auto-standby – with countdown**

Proposal - Informing

⮑ **Countdown message for 15 minutes before auto-standby**

- **Message on screen**
- **Slow flash of the power/standby indicator on the STB**
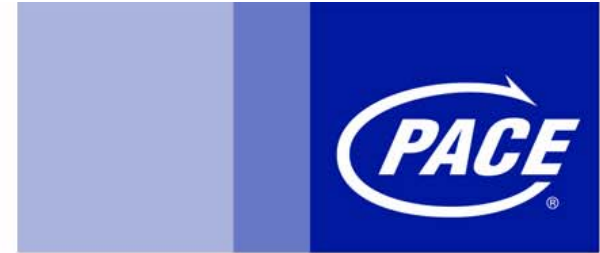- **Distinctive audible signal (for those just listening to radio and the partially sighted)**

Power/standby
LED flash

Auto-standby will occur in 15 minutes
Press power/standby key for standby options
Press any other key to cancel auto-standby

Audible
notification

Proposal - Delaying

PACE

⮂ **Power/standby menu for delay of auto-standby on a one-time basis**

- **Pressing the power/standby key will always bring up this menu**
- **If no further action the STB will go into standby in 15 seconds**
- **Up/down arrow keys can select various 'one-time' delays of auto-standby**

Standby delay options

➢ **None (turning off in 15 seconds)**
  1 hour (auto-standby default)
  12 hours
  1 day
  1 week
  2 weeks
  4 weeks

Use up/down programme keys to select
Use power/standby key to confirm selection

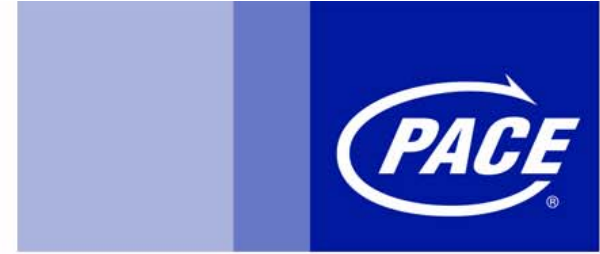**This delay will occur once then go back to the default**

Power/standby
LED flash

Proposal - Defeating

- There are some non-domestic applications requiring continual audio/video output without user intervention (e.g. hotel distribution systems or public video displays)
- For these, turn off the auto-standby function from a hidden 'installer' menu
- Factory default will ALWAYS be with auto-standby enabled
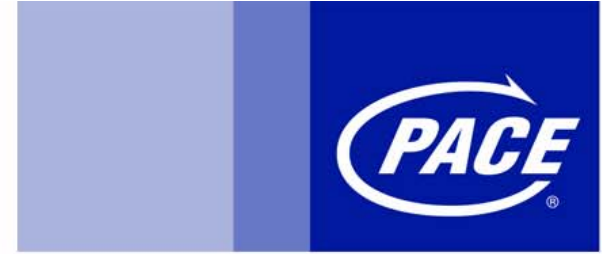
Philosophy and Progression

⮥ **Underlying philosophy**

- Achieving power saving independent of user action
- Avoiding unwanted disruption of programme viewing
- Inclusion of delay function to facilitate recording on an external device
- Simple, clear messages for the user
- Simple and consistent control using minimum of keys

⮥ **How do we progress?**

- Discuss this proposal, modify and refine
- Consider the effect of auto-standby upon the user with different set-ups
- Agree a common basic standard for auto-standby
- Involve 3rd party software suppliers to achieve their co-operation
- Encourage adoption – possibly through the IEA who could own the document
- Encourage development of a standard communication protocol between devices for power management

Postscript

Following circulation of the original draft proposal, there have been a number of useful suggestions:

➲ It should be possible for the user to select an auto-standby time of 2 hours or 4 hours, if 1 hour is inconvenient in their situation.

➲ Some broadcast streams do not include any programme change information. When this applies, the auto-standby time could be set to 4 hours from the last user command.

➲ Externally connected devices may be able to signal their state to the STB via the SCART or HDMI connection. When this information is available, the auto-standby function should only start timing from the point where the external device is turned off.

➲ Any user-set timer recording, scheduled software download or action requested by the service provider would override auto-standby