

# IEEE 1394b B-Low Power Task Group

---

## Characteristics of “Standby”:

- An extended PHY Command Packet (Command code 7/1) shall be used to place a leaf node into Standby.
  - A command code of 7 indicates that an extended PHY command code exists in the four bits immediately adjacent to the normal PHY command packet command bits.
    - ✓ The following extended command codes shall be defined:
      - 0 = NOP
      - 1 = Initiate Standby with the connected peer port
      - 2 = Initiate restore from standby with the connected peer port.
      - 3 through F = Reserved
- A node will restore from Standby when either asserting a resume tone or detecting a resume tone.
- A parent port will not preclude itself (in hardware) from initiating Standby to inappropriate child ports - software must do the right thing.
- **The Standby command shall be sent to the leaf node port.** (Previously: The Standby command shall only be sent to the parent port.)

# IEEE 1394b B-Low Power Task Group

---

## Characteristics of “Standby” (Cont’d):

- Beta mode only leaf nodes may implement Standby only (e.g. they are not required to support Suspend/Resume); however, they shall respond to an RX\_SUSPEND extended control code by entering into Standby.
- **Only true leaf nodes may be placed into standby.** (Previously: A port which is currently a leaf node can be placed in Standby ("D1"). If, whilst it is in standby, a connect event occurs so that it is not a leaf node any more, the node shall restore from Standby. A bus reset will occur. Since the node is no longer a leaf node, it can no longer be placed in standby.)
- A bus reset shall not occur as part of entering Standby or restoring from Standby.
- The parent of a node in standby shall "proxy" the self-ID packet of the node in Standby subsequent to any bus reset.
- When a node restores from Standby, it shall receive its node-ID from its parent port before becoming active.
- Restore from standby latency (e.g. from “D1” to “D0” shall be approximately 3 milliseconds

# IEEE 1394b B-Low Power Task Group

---

## Issues:

- How and where to save the Leaf Self-ID so it may be "proxied" by the parent node of the leaf when (if) a bus reset should occur?
- How is node-ID of the stored Leaf Self-ID updated subsequent to a bus reset whilst Leaf is in Standby?
- How does the parent node synthesize the self-ID of a Leaf node in Standby?
- How is the parent port determined in a node which has attached to one of its ports a child Leaf nodes in Standby?

# IEEE 1394b B-Low Power Task Group

---

## Discussion Items:

- What goes into the “synthesized” self-ID packet?
- Definition of an extended control codes for the standby command...
- Assuming a “multi-port” leaf node (e.g. a node with only one port connected, define process for restoring “leaf” node from standby on a new connection to the “leaf” node...
- Given a “multi-port” node with one or more ports suspended and one or more ports disconnected and only one port active, may the active port be treated as a “leaf” node - the suspended ports do not require a self-ID to be proxied.
  - Given the above, define what happens when the suspend domains resumes and or a connection is made to one of the disconnected ports.