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# Harmonization of ISO/IEC 14443-3 PDAM 3 with FDIS ISO/IEC 21481

Expert contribution by Hans-Rudolf Thomann, H.R. Thomann Consulting  
Presented to the Special Group on Harmonization on 20th September, 2012

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- PDAM 3 specifies the PXD alternation capability
- 21481 specifies mode selection of the PICC, PCD, NFC and VCD mode
- Harmonization of PDAM 3 with 21481 should prevent
  - Duplication of specifications
  - Lack of interoperability between PXDs and NFCIP-2 devices.
- Harmonization is easily achieved in the usual way:
  - **By referencing existing specifications**

# Proposed text



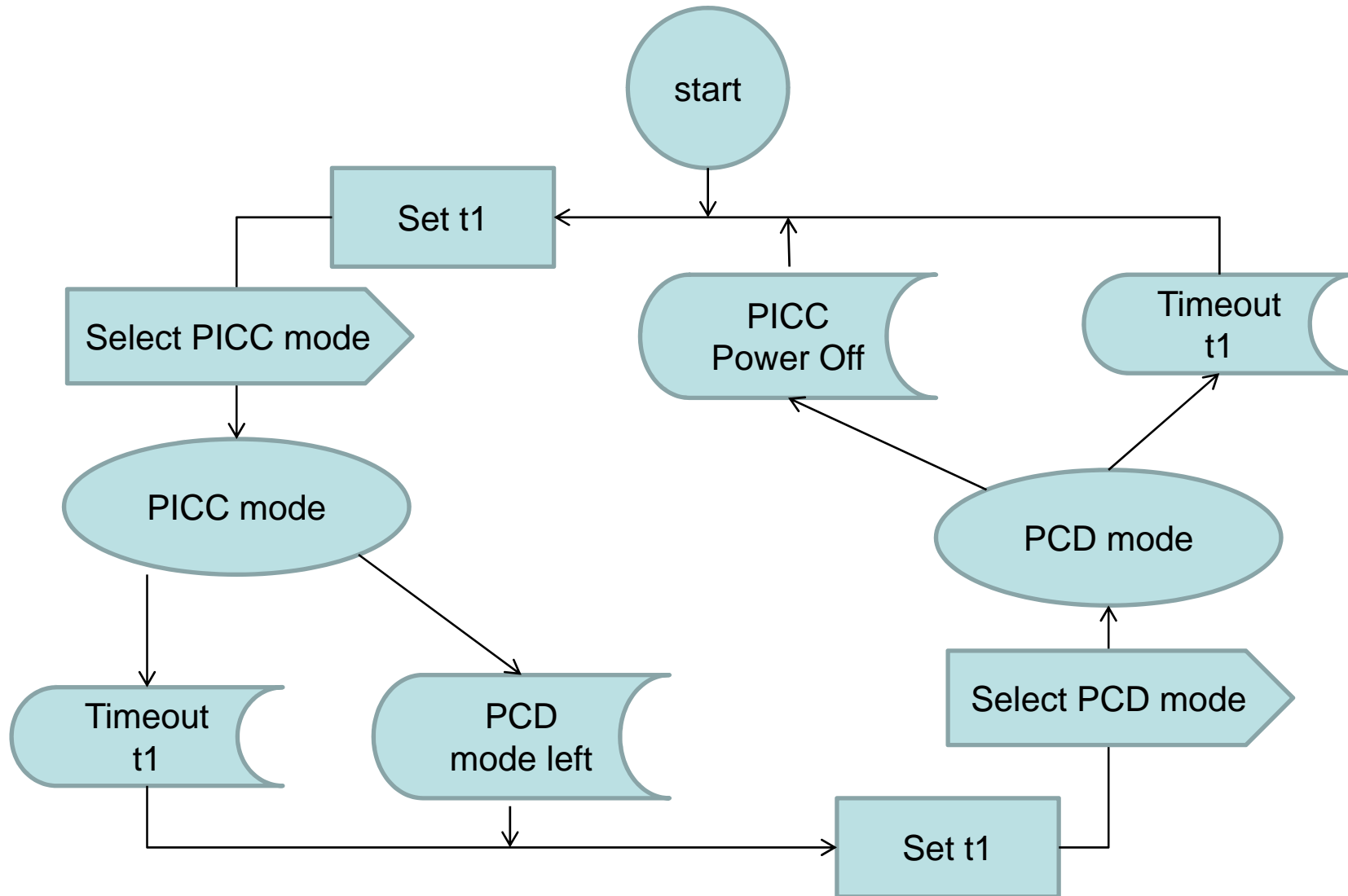
Replace the text after the sentence „... with a maximum cycle time  $t_{\text{cyc}} = 1\text{s}$ “ by the following text:  
“and randomly set the PICC mode duration for each cycle to a value chosen from a set of at least 2 different values differing by at least for  $t_{\text{diff}} = 5\text{ ms}$ . The alternation shall be performed as follows:

1) The PXD shall set timer  $t_1$  as specified above and select the PICC mode. Thereafter it shall perform the mode switching as specified in ISO/IEC 21481, clause 7, until either timer  $t_1$  expires or a PICC POWER OFF occurs.

2) After the previous step, the PXD shall set timer  $t_1$  as specified above and select the PCD mode. Thereafter it shall perform the mode switching as specified in ISO/IEC 21481, clause 7, until either timer  $t_1$  expires or the PCD mode is left. Thereafter the PXD shall return to the previous step.

The diagram below illustrates this process. The mode selection is represented by a signal sent to an underlying process implementing the mode switching as specified in ISO/IEC 21481, clause 7.

# PXD Diagram





# Thanks for your attention!



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