Summary of Windows7 upgrade

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This is a summary note of procedures and works done in September 2013 related to operating system update for three PCs for DC-spark experiments.

The operating system of PCTE23546, PCTE23715, PCTE23873 were updated from WindowsXP to Windos7 at 02/09/2013.
Following works were required to fix the measurement system working with the W7.
1. LabView2011 installation
2. GPIB driver installation
3. PCI Serial port driver installation
4. USB Serial port driver installation
5. LabView DAQmx installation and update measurement programmes
6. Assign VISA resources in LabView VIs to corresponding instruments.

1. LabView2011 installation
It is done via CERN CMF. The license code of LabView related softwares for CERN is H11X40405.

2. GPIB driver installation
In order to use GPIB devices with PCI-GPIB / Win7, one had to install NI-488.2 3.1.1:
http://joule.ni.com/nidu/cds/view/p/id/3786/lang/en
The downloaded files are saved in:
G:\Divisions\EST\Groups\SM\ThinFilms\CLIC_Spark_test_Project\Lab
Measurements\LabVIEW\National Instruments Downloads

3. PCI Serial port driver installation
In order to use devices with PCI-Serial Port / Win7, one had to install appropriate driver:
Open "Control Panel > System > Device Manager"
Right click "Ports (COM & LPT) or corresponding port", then choose "Update Driver Software".
-> Search automatically for updated driver software.
An appropriate driver will be found and installed automatically.

4. USB Serial port driver installation
In order to use devices with USB Serial Port / Win7, one had to install appropriate driver:
Open "Control Panel > System > Device Manager"
Right click "Universal Serial Bus controllers > corresponding port", then choose "Update Driver Software".
-> Search automatically for updated driver software.
An appropriate driver will be found and installed automatically.
Or, one can install manually from here (for FuG power supply): http://www.fug-elektronik.de/webdir/2/download_e.htm

5. LabView DAQmx installation and update measurement programmes
Traditional NI-DAQ for LabView is not compatible any more for Win7 64bit machine. Switch control programmes are written with this and was required to be modified. I made a subVI "write_dig_line_DigitalOutput.vi" written in NI-DAQmx to be replaced with "Write to Digital Line.vi".
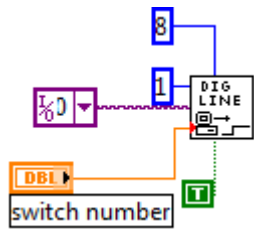
Figure 1 Switch control with "Write to Digital Line.vi" with traditional NI-DAQ.

Figure 2 Switch control with "write_dig_line_DigitalOutput. vi" with NI-DAQmx.

Replacements were done one by one in the measurement programmes such as *BetaEvolution_Ver3_5_3.vi* and the file name was modified to *ORIGINAL_NAME_*DAQmx.*vi*, for example *BetaEvolution_Ver3_5_3_DAQmx.vi*.

Please note that sub (old) libraries and/or VIs used in most of measurement programmes can be found here:
G:\Divisions\EST\Groups\SM\ThinFilms\CLIC_Spark_test_Project\Lab Measurements\LabVIEW\libraries\LabView8.2-vi.lib-Daq

6. Assign VISA resources in LabView VIs to corresponding instruments.
Once interface drivers were properly installed, your device can be visible in Measurement & Automation Explorer (MAX) (My System > Devices and Interfaces). One can rename the VISA alias on the system. For now (September 2013) devices are aliased as: SimStep (ASRL4), TPG300(ASRL5), FuG(ASRL6) for serial connections.