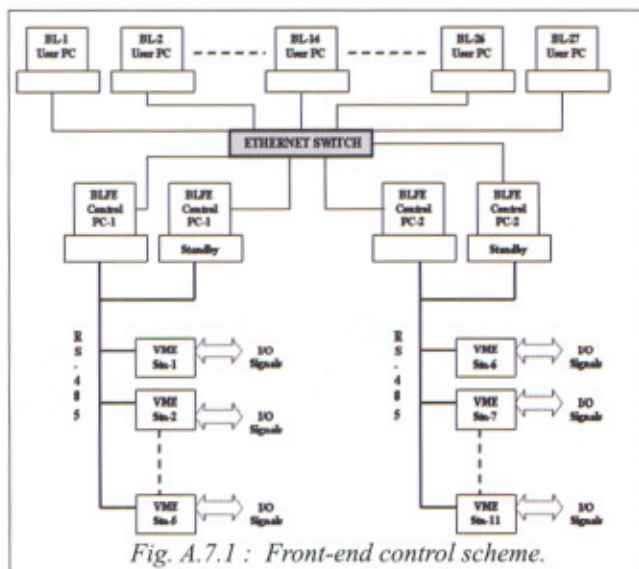


A.7: Development of webpage for on-line access of Indus-2 front-end parameters

Indus-2 front-end control scheme is on client-server based developed in window XP operating system. A dedicated separate local area network is planned for front-end operation as explained in Fig. A.7.1. For 27 front-ends 2 servers were designed, one server handles operation and status information of 12 front-ends and other for 14 frontends. The purpose of the two separate sever was to ease the load of operation and to have less maintenance time in case of any failure. The separate local area network restricted beamline user from



obtaining the beamline information on laboratory local area network of RRCAT. To overcome this situation following measures have been taken.

To provide information of all the installed front-ends on local area network which can give particulars of status of all installed valves, vacuum at different location in front-end and temperature of water cooled components. Following scheme has been deployed using three separate PCI based Giga byte Ethernet network cards. Two cards are used in client mode to fetch data on the local area network of front-ends at regular interval and one is used for internet access through laboratory local area network of RRCAT. The programming of displaying data and publishing on web is developed using National Instruments LabVIEW® software. The tool used to publish data is national instruments web server. LabVIEW Web Server publishes the image of front panels on the Web after enabling the Web Server.

The Web Server generates images of front panels in the JPEG and PNG image formats. Web Publishing Tool create an HTML document and embed static or animated images of the front panel or to embed a front panel in an HTML document so a client computer can view and control the front panel remotely. We have used the Monitor option in the Web Publishing Tool to return an animated image of the front panel of a VI currently in memory on the server computer as shown in Fig. A.7.2. The refresh rate of the VI is 2 seconds.

The web address of front-end information is <http://feskr/fe.html>.

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	GV-0	WCS	GV-1	FCS	GV-2	SS	GV-3	WF	AP	FEOK	FEM	P1	P2	P3	P4	CMT	FMT	WOT
BL-01	OPEN	CLOSE	OPEN	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	4.892E-10	1.132E-9	5.491E-10		28	27	30
BL-02																		
BL-03																		
BL-04																		
BL-06																		
BL-07	OPEN	CLOSE	OPEN	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	1.105E-9	2.894E-9	7.721E-10	1.090E-9	27	26	24
BL-08	OPEN	CLOSE	OPEN	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	1.470E-9	1.264E-9	4.195E-10		0	NC	23
BL-09	OPEN	CLOSE	CLOSE	OPEN	CLOSE	CLOSE	OPEN	OK	OK	OK	NO	7.507E-10	1.708E-9	8.401E-10		22	21	23
BL-11	OPEN	CLOSE	CLOSE	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	2.841E-9	1.011E-9	1.376E-9		25	27	23
BL-12	OPEN	OPEN	OPEN	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	1.553E-9	1.058E-9	6.499E-10		26	NC	23
BL-13	OPEN	CLOSE	CLOSE	OPEN	CLOSE	CLOSE	OPEN	OK	OK	OK	NO	2.683E-10	1.919E-9	7.049E-10		26	28	25
BL-14	OPEN	OPEN	OPEN	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	5.681E-9	1.618E-8	2.051E-9		29	33	25
BL-16	OPEN	CLOSE	OPEN	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	2.048E-9	5.360E-10	1.094E-9		28	26	25
BL-17																		
BL-18																		
BL-21	OPEN	CLOSE	CLOSE	OPEN	OPEN	CLOSE	OPEN	OK	OK	OK	NO	2.282E-9	5.844E-10	1.237E-9		26	25	24
BL-22																		
BL-23	OPEN	CLOSE	CLOSE	OPEN				OK	OK	OK	NO	2.315E-9	7.255E-10	1.094E-9		27	NC	24
BL-24																		
BL-26																		

GV-0,1,2:Pneumatic Gate Valve ; WCS: Water Cool Shutter; FCS: Fast Closing Shutter; SS: Safety shutter ; WF: Water Flow status; AP: Air Flow
GV3: Manual gate Valve ; FEM: Frontend Under maintenance ;CMT: Collimeter Temperature ; FMT: Fix Mask Temperature ; WOT: Water Outlet temperature

Fig. A.7.2 : Web page of front-end information