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THE IMPACT OF BITSCONNECT ON PILANI

There are three areas where BITSCONnect will have an immediate benefit for BITS, as outlined below.

BITS Virtual University

To make Internet-enabled learning possible, the Centre for Development (CSD) has launched the BITS Virtual University. Virtual University shall assist the Distance Learning Programmes Division (DLPD) in providing improved educational support to over 7,500 students off-campus. This is a significant source of revenue for the institute. BITSCONnect has resulted in a move to significantly upgrade our server farms, which drives far superior performance of the Virtual University in terms of delivery of text and audio-visual course content. The external bandwidth has recently increased to 2 Mbps and as the demand increases, the network will allow it to go up to 4 Mbps.

Wide-Area Research Collaboration

BITS has already made its mark in the field of internetworking research, development and deployment and has several firsts (about ten) to its credit, specifically in the area of Internet Protocol version 6 (better known as IPv6). IPv6 HAS over twenty-two international collaborators, including BITS.

BITSCONnect shall enable BITS-Pilani to be the first ever Indian University to have a fully IPv6-capable Intranet. Also, once the adequate bandwidth is added both internally and externally, the Institute's could join the Internet2 initiative as part of a nation-wide research network that in turn shall be an MoU-partner to the Internet2.

BITSCONnect will thus enable quality collaborative research for some of the cutting-edge research in Computer Science like the on-going "BITS Multimedia Operating System Project", and Ubiquitous/Wearable Computing.

Naturally, with the increased WAN-link available now, the improved campus infrastructure provided by the BITSCONnect will also enable inter-BITS (across Pilani, Goa and Dubai campuses), intra-BITS, inter-institute and inter-industry collaboration on research projects.

Hybrid delivery of Campus Education

BITS has developed a framework to deliver courses on the web along with the conventional method of classroom teaching. The framework envisages archiving classroom lectures in audio-visual formats that can then be replayed by the student if and when he wants to.

The facilities include the internal interface of the BITS-Virtual University for on-campus students through the "CampusBuzz" and "IntraBITS" portals as well as an internal interface to Faculty of the institute through the on-line Course Management Tool (CMT).

BITSCONnect will allow real-time multicasting of lectures in an interactive mode. For this purpose, the campus has already the Cisco IP/TV facility in place that allows Live Delivery of the lectures over the Intranet, capability of Video-on-Demand and Scheduled Video Multicasting for on as well as off-campus students of BITS.

This will "virtually" reduce the student-teacher ratio on campus, allow more lecture notes to be placed on the institute's intranet for reference since already this is being done for a few courses across disciplines. Lastly, tests and assignments may be administered and submitted online. †

The Power of the Network

In 1992, I stood up in front of my thesis panel with a 5 ft by 4 ft chart with the results of my thesis. I had crunched about 10 years worth of time-series data for 50 companies listed on BSE after securing permission to use PS Division's only PC. This PC was important because it had SPSS - a statistical software. I had painstakingly copied the data from print publications into a book, and then stayed up many nights at the PSD, laboriously inputting the data as the PC was almost continually used during daytime. Of course, the thesis didn't amount to much from a GPA perspective, but it was certainly one of the first uses of statistical software for academic research in Pilani.

The following year, I joined an MBA program in Texas, and worked on a similar project. From my dorm room, I downloaded all the economic data from a Thomson terminal, then ran the tests using SAS, another statistical software.. I completed my analysis in less than a day.

At Pilani, I think I impressed my professor with the quantity of data I managed to transfer to a PC. At Texas, I was reviewed on the quality of my analysis.

That's when I realized how far behind was BITS in its infrastructure. If only we had the BITSCONnect network back then...

- Venu

Need More Information on BITSCONnect? Visit www.bitsaa.org

For more questions regarding BITSCONnect, visit the website. Here you can watch a recording of the India Post TV interview, watch an audio-visual presentation of BITSCONnect, and read about the latest updates. Or send an email to bitsconnect@bitsaa.org if you have any questions.