



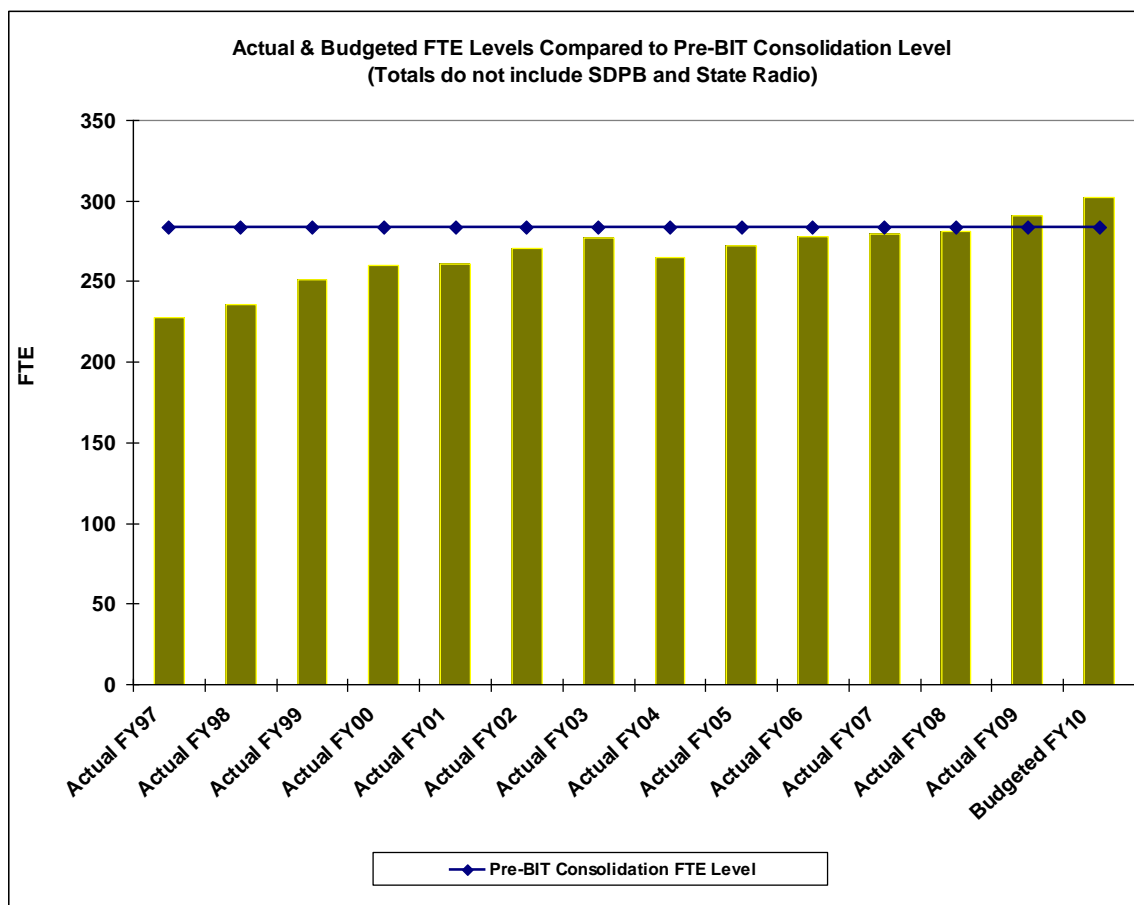
February 8, 2010

MEMORANDUM FOR: Joint Appropriations

FROM: Otto Doll, BIT Commissioner

SUBJECT: Response to Requests for Additional Information

1. Response to Senator Ahlers request for FTE consolidation information:



The above post-BIT consolidation FTE levels resulted in *avoiding* \$18.02 million in personal services funding over a 12 year span. Note, the initial personal services reductions were taken out of agency's FY97 budgets.

2. Response to Representative Peters request for Other Funds clarification:

The chart below shows projected FY11 information technology (IT) BIT revenue by agency. Note, BOR comes under the Regents and Lottery is under the Revenue Department.

BIT Projected FY11 Other Funds

Agency	Dollar Amt.	Percentage
ATG	\$ 362,913	1.0770%
AUD	\$ 31,743	0.0942%
BFM	\$ 887,143	2.6326%
BOA	\$ 248,377	0.7311%
BOP	\$ 527,288	1.5648%
BOR	\$ -	0.0000%
DOE	\$ 942,686	2.7975%
DENR	\$ 337,531	1.0016%
DHS	\$ 1,908,292	5.6630%
DOA	\$ 301,184	0.8938%
DOC	\$ 1,114,539	3.3075%
DOH	\$ 1,251,134	3.7128%
DOL	\$ 2,354,674	6.9876%
DOT	\$ 3,027,167	8.9833%
DPS	\$ 965,302	2.8646%
DSS	\$ 7,391,214	21.9338%
GFP	\$ 886,000	2.6293%
GOV	\$ 65,609	0.1947%
IC	\$ 41,605	0.1235%
Lottery	\$ -	0.0000%
LRC	\$ 269,683	0.8003%
MVA	\$ 117,605	0.3490%
OHE	\$ 5,251	0.0156%
PUC	\$ 72,189	0.2142%
Regents	\$ 4,401,523	13.0618%
RET	\$ 361,662	1.0733%
REV	\$ 2,369,580	7.0319%
SOS	\$ 219,768	0.6522%
SPL	\$ 14,295	0.0424%
TSD	\$ 315,301	0.9357%
TRE	\$ 15,658	0.0465%
UJS	\$ 1,081,183	3.2085%
BIT	\$ 1,687,386	5.0074%
OTHER	\$ 124,275	0.3688%
	\$ 33,697,763	100.0000%

These amounts were calculated using FY11 projected rates and FY09 actual usage.

3. Response to Representative Peters request for YTD budget figures:

BUREAU OF INFORMATION AND TELECOMMUNICATIONS FY10 YTD
Tuesday, February 09, 2010

013 PROGRAMS BUREAU OF INFORMATION

	Budget	YTD Amount	Remaining Budget
Total PS	23,496,158	14,034,944	9,461,214
Total OE	30,795,394	15,347,824	15,447,570
Total PS & OE	<u>54,291,552</u>	<u>29,382,768</u>	<u>24,908,784</u>

0131 DATA CENTER

	Budget	YTD Amount	Remaining Budget
Total PS	3,851,104	2,294,901	1,556,203
Total OE	4,435,697	3,113,807	1,321,890
Total PS & OE	<u>8,286,801</u>	<u>5,408,708</u>	<u>2,878,093</u>

0132 DEVELOPMENT DIVISION

	Budget	YTD Amount	Remaining Budget
Total PS	8,780,620	5,309,888	3,470,732
Total OE	2,023,040	1,048,559	974,481
Total PS & OE	<u>10,803,660</u>	<u>6,358,447</u>	<u>4,445,213</u>

0133 TELECOMMUNICATIONS

	Budget	YTD Amount	Remaining Budget
Total PS	5,419,892	3,072,597	2,347,295
Total OE	16,281,777	8,111,110	10,170,667
Total PS & OE	<u>21,701,669</u>	<u>9,183,707</u>	<u>12,517,962</u>

0134 SOUTH DAKOTA PUBLIC BROADCASTING

	Budget	YTD Amount	Remaining Budget
Total PS	3,360,691	2,118,234	1,242,457
Total OE	5,405,842	3,585,428	1,820,416
Total PS & OE	<u>8,766,533</u>	<u>5,703,660</u>	<u>3,062,873</u>

0135 BIT ADMINISTRATION

	Budget	YTD Amount	Remaining Budget
Total PS	1,506,217	878,738	627,479
Total OE	431,974	299,705	132,269
Total PS & OE	<u>1,938,191</u>	<u>1,178,443</u>	<u>759,748</u>

0136 STATE RADIO

	Budget	YTD Amount	Remaining Budget
Total PS	577,634	360,585	217,049
Total OE	2,217,064	1,189,219	1,027,845
Total PS & OE	<u>2,794,698</u>	<u>1,549,804</u>	<u>1,244,894</u>

4. Response to Senator Hunhoff and Representative Peters request for REED Network budget and costs:

FY10 Board of Regents Estimated Wide Area Networking Charges from BIT			
REED Charges			
	SD, MN, NE Networking Costs	\$1,232,176	
	Network Surveillance Center	\$66,000	
	BIT Support Costs	\$265,918	
	Hardware & Software Maintenance	\$176,941	
	Subtotal	\$1,741,035	Yearly
Subscription Service Charges			
	Subtotal	\$405,453	Yearly
REED + Subscription Services			
	Total	\$2,146,488	Yearly

The networking costs represent the costs for networking services across SD, to Minneapolis and to Bellevue, NE. The Network Surveillance Center is for network management services. BIT includes fte and other costs. Hardware and software maintenance is for electronics within the REED to include switches, optics and network management. Note, Subscription Service Charges are for Internet 1 access and communication lines to non-REED locations, such as the Rapid City Nursing School, etc.

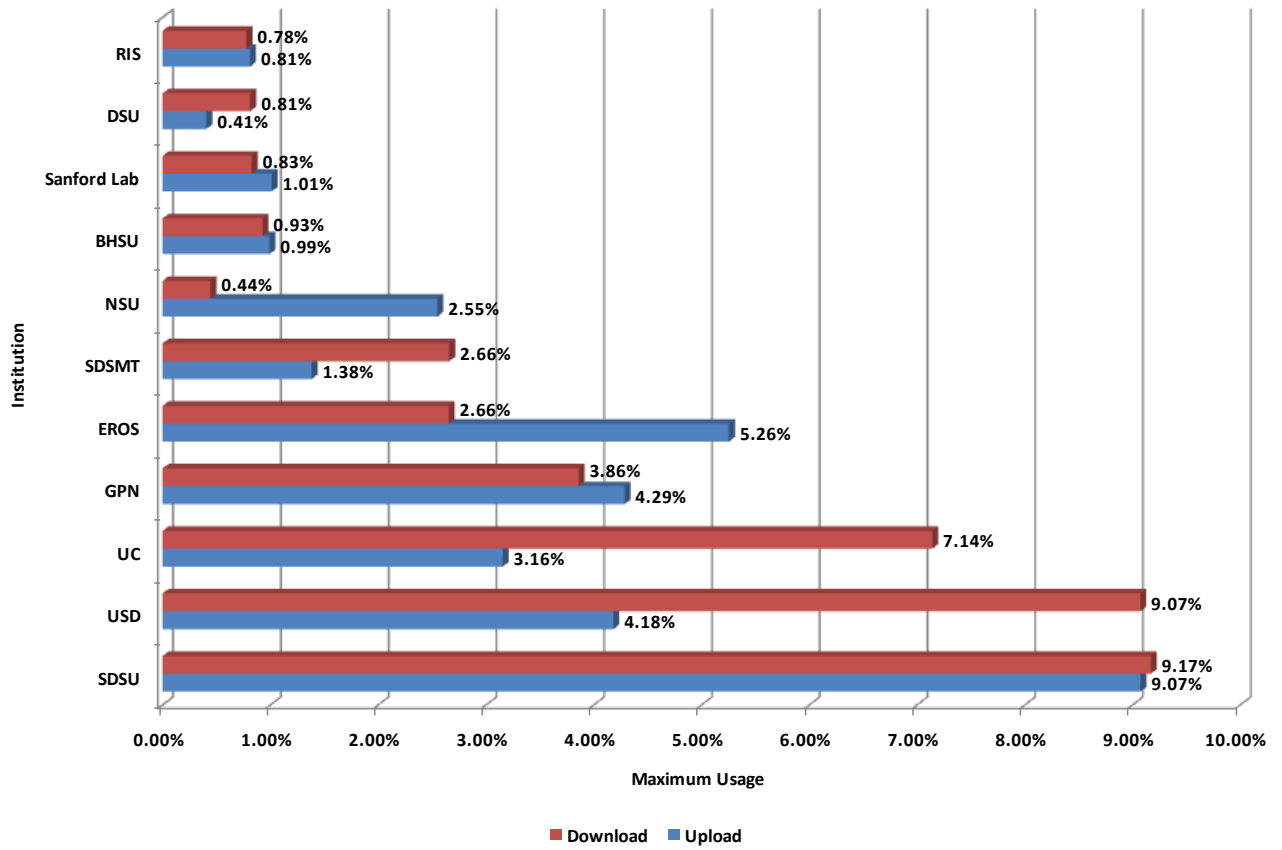
5. Response to Senator Hunhoff and Representative Wink request for REED Network capacity and usage by site:

Chart considerations:

- These charts are a summary of the “research” connections at the university locations.
- Each chart displays the “maximum” transmission percentage on each campus for the research wave (or lambda). The period of time measured is since the site has been connected to the REED.
- The maximum allowable speed on each connection is 10 Gbps or 10,000 Mbps. For example, a chart showing a 10% peak, demonstrates a 1 Gbps peak for that university. A 1% peak demonstrates a 100 Mbps peak, etc.
- The “research” activity is split from the “production” traffic onto separate waves / lambdas / channels. Production traffic includes Internet 1, distance learning and Datatel/Prod traffic. Graphs for production traffic are available but not included. The line of questioning simply focused on “REED” activities.
- Each campus has (5) waves / lambdas / channels available at 10Gbps each. A combined campus total of $5 * 10 \text{ Gbps} = 50 \text{ Gbps}$. If “channel 1” = production traffic, “channel 2” = research traffic, “channels 3 – 5” are empty, waiting for services.
- The graphs depict traffic coming into the campus (download = **red**) and traffic leaving the campus (upload = **blue**).
- Research traffic is “bursty” in nature. A lot of data will be sent in a short amount of time, and then will likely remain quiet for a long period of time.
- The perspective of success or failure of the REED cannot be viewed in the amount of traffic sent and received. No other state programs are measured on success or failure dependent on the amount of computer data sent and received. University research in general must be measured against what the Board of Regents originally established as research goals to be achieved with REED as an additional tool available to them. Those goals being:
 - Increased number of “eligible” grants requiring high speed research access.
 - Increased number of grants received by the universities.
 - Increased number of researchers moving into South Dakota.
 - Increased trickle-down effect towards economic development occurring from increase in grant dollars.
 - Marketing value of high speed connectivity compared to other institutions.

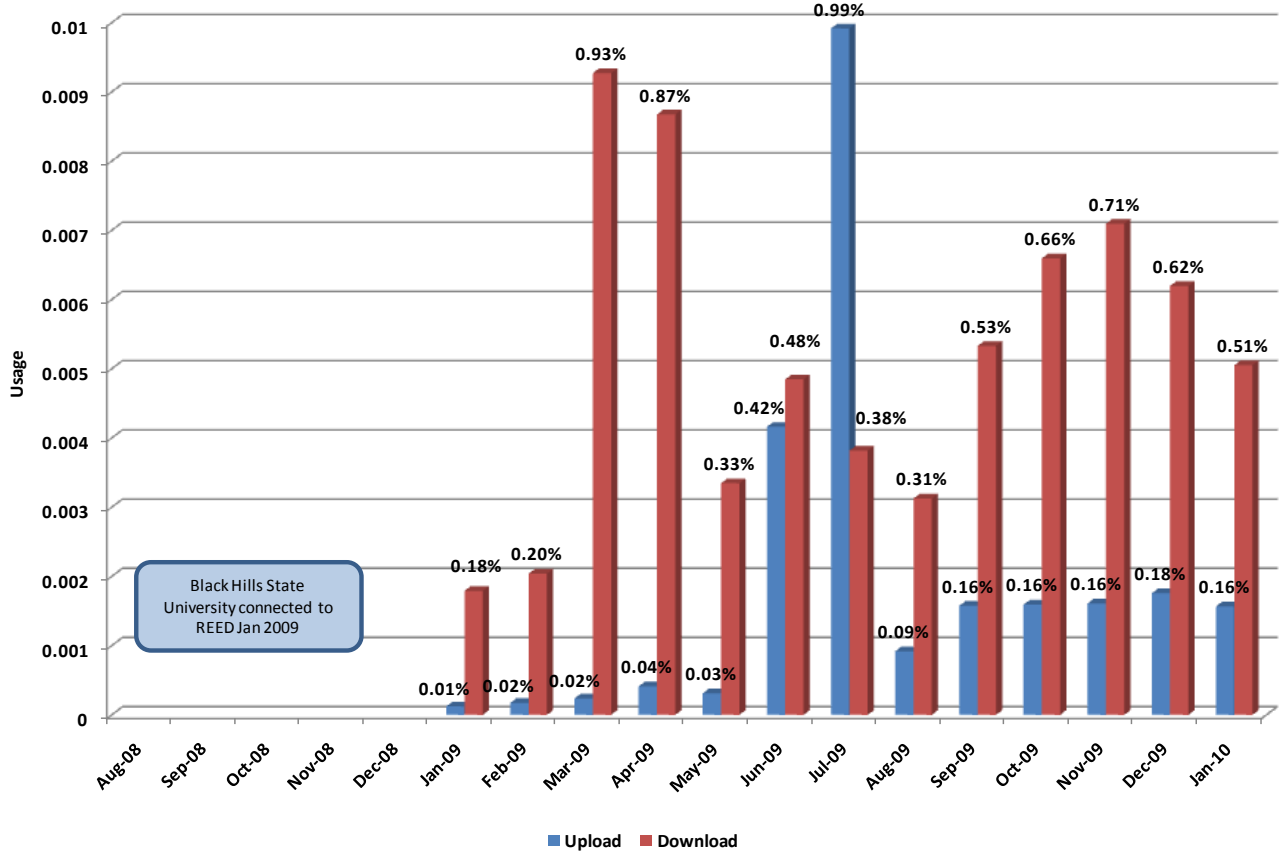
REED Research Connections

Maximum Utilization Achieved as a Percentage of a 10 Gbps Lambda



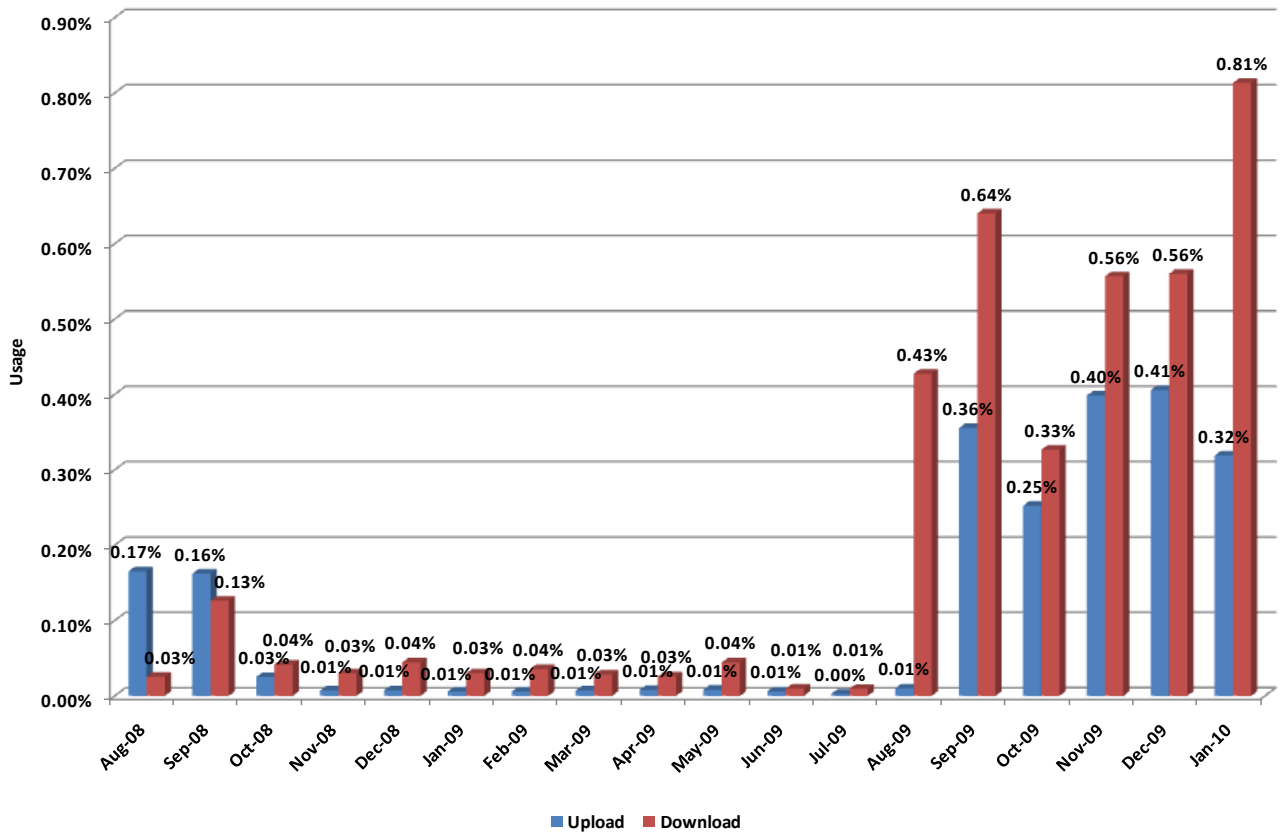
Black Hills State University - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



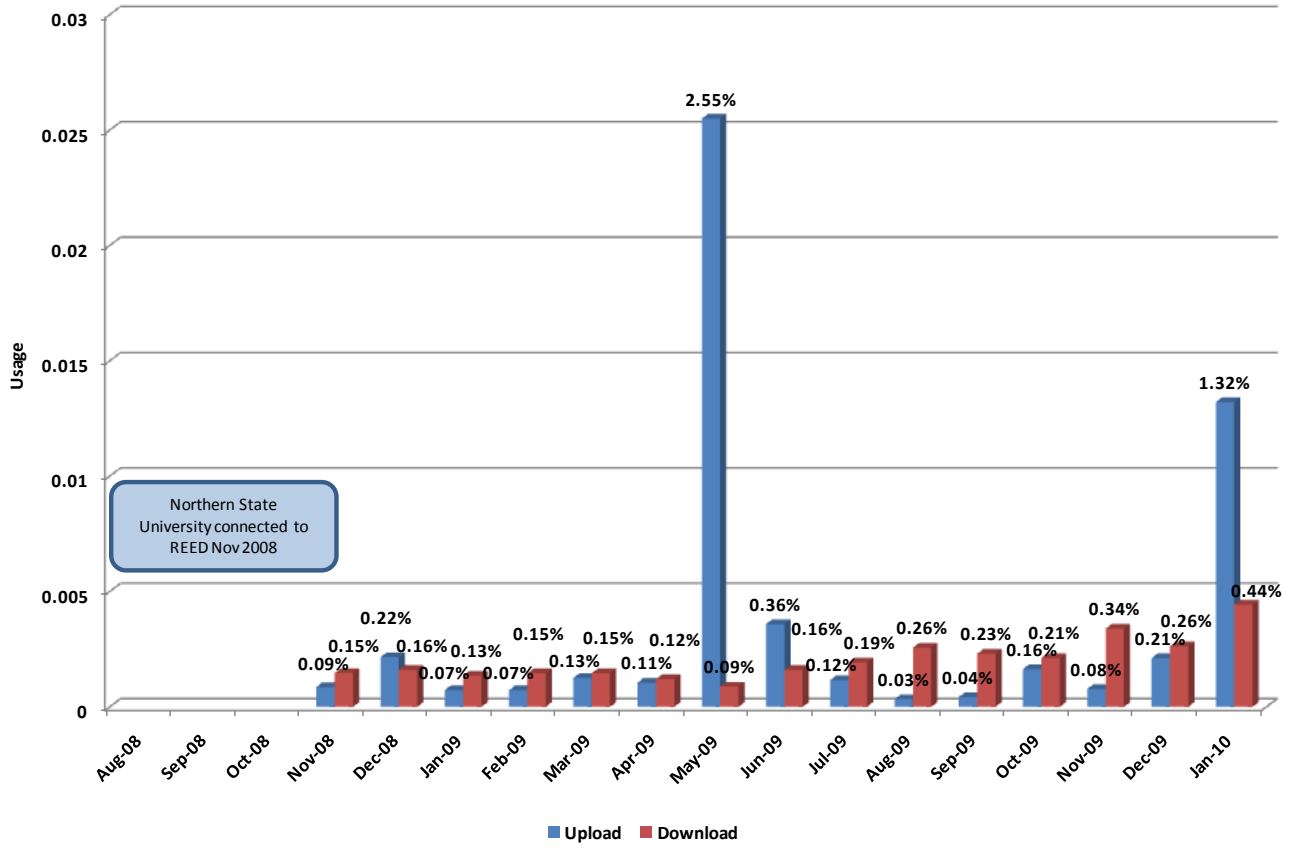
Dakota State University - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



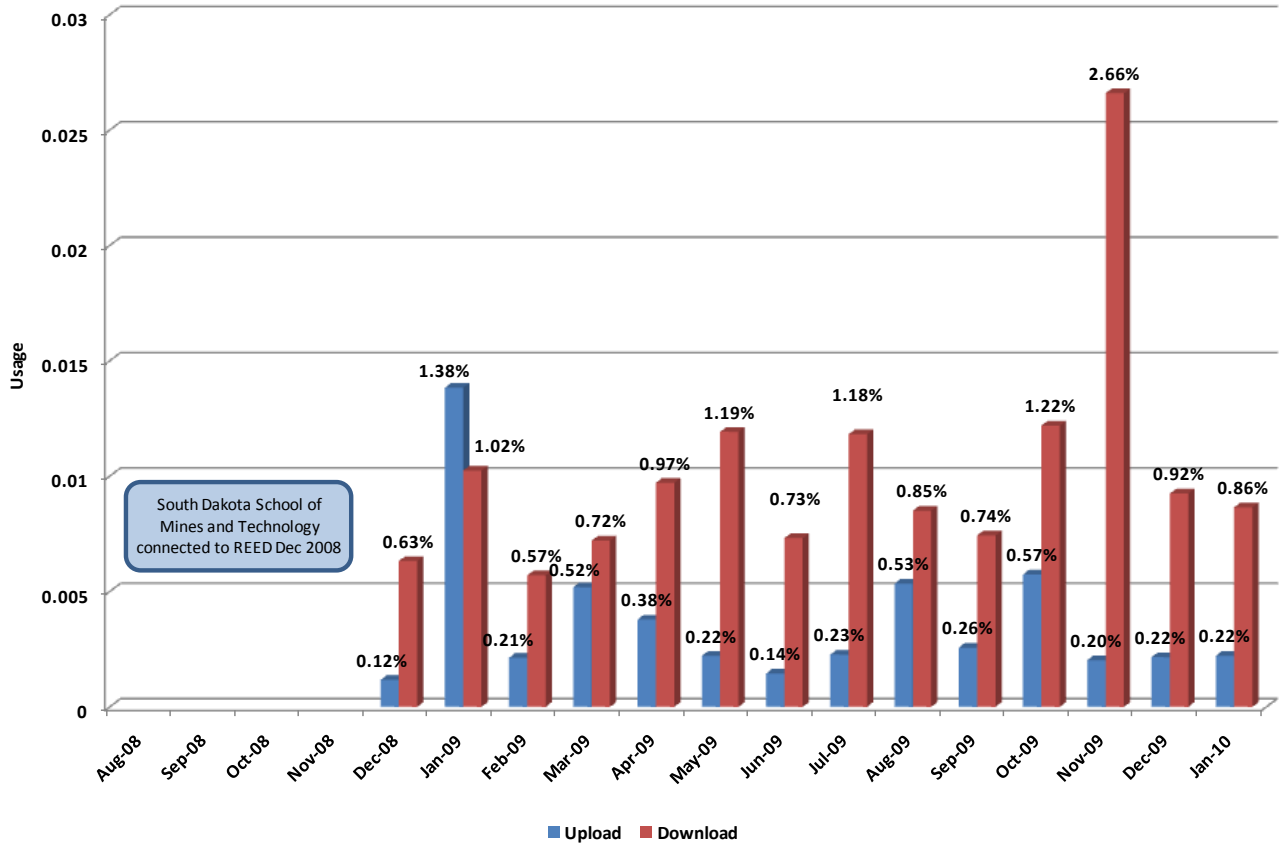
Northern State University - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



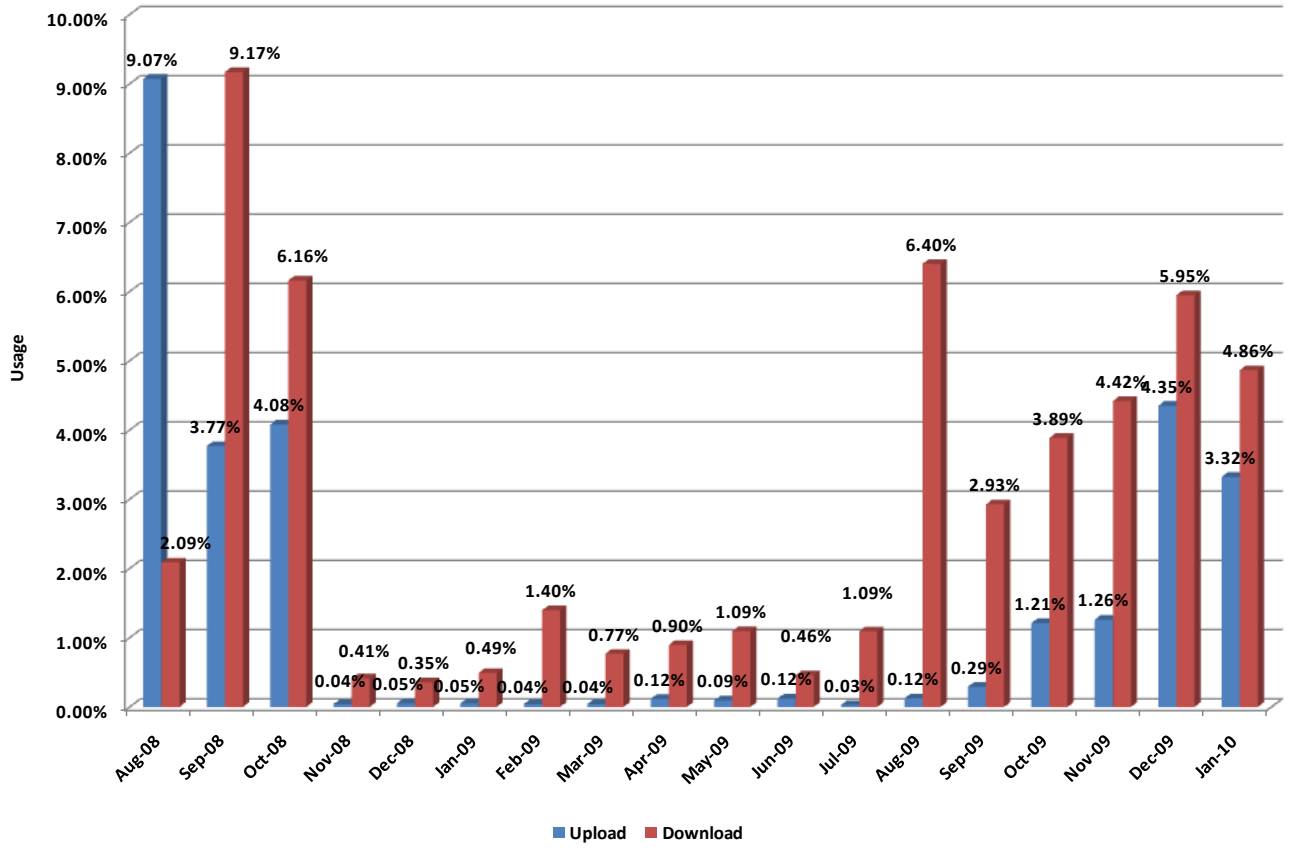
South Dakota School of Mines and Technology - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



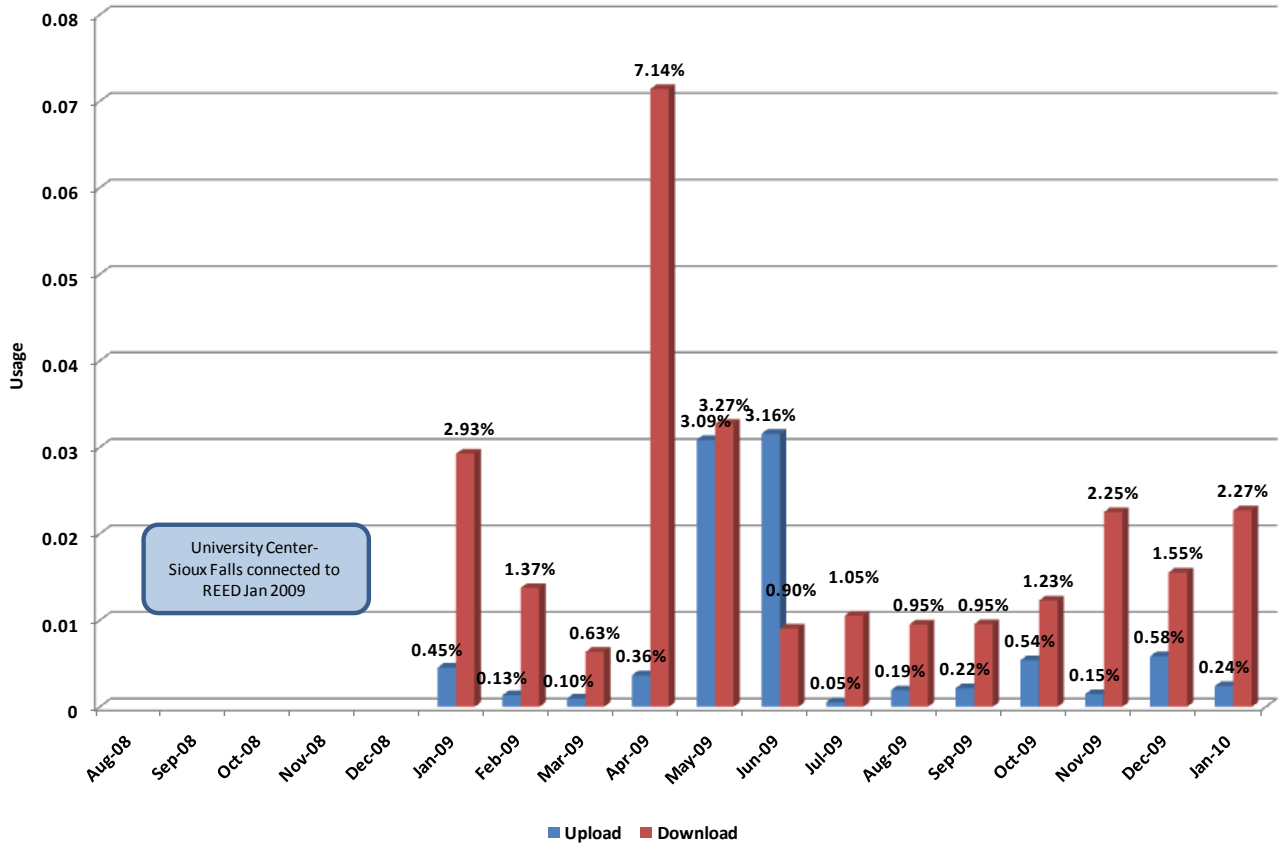
South Dakota State University - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



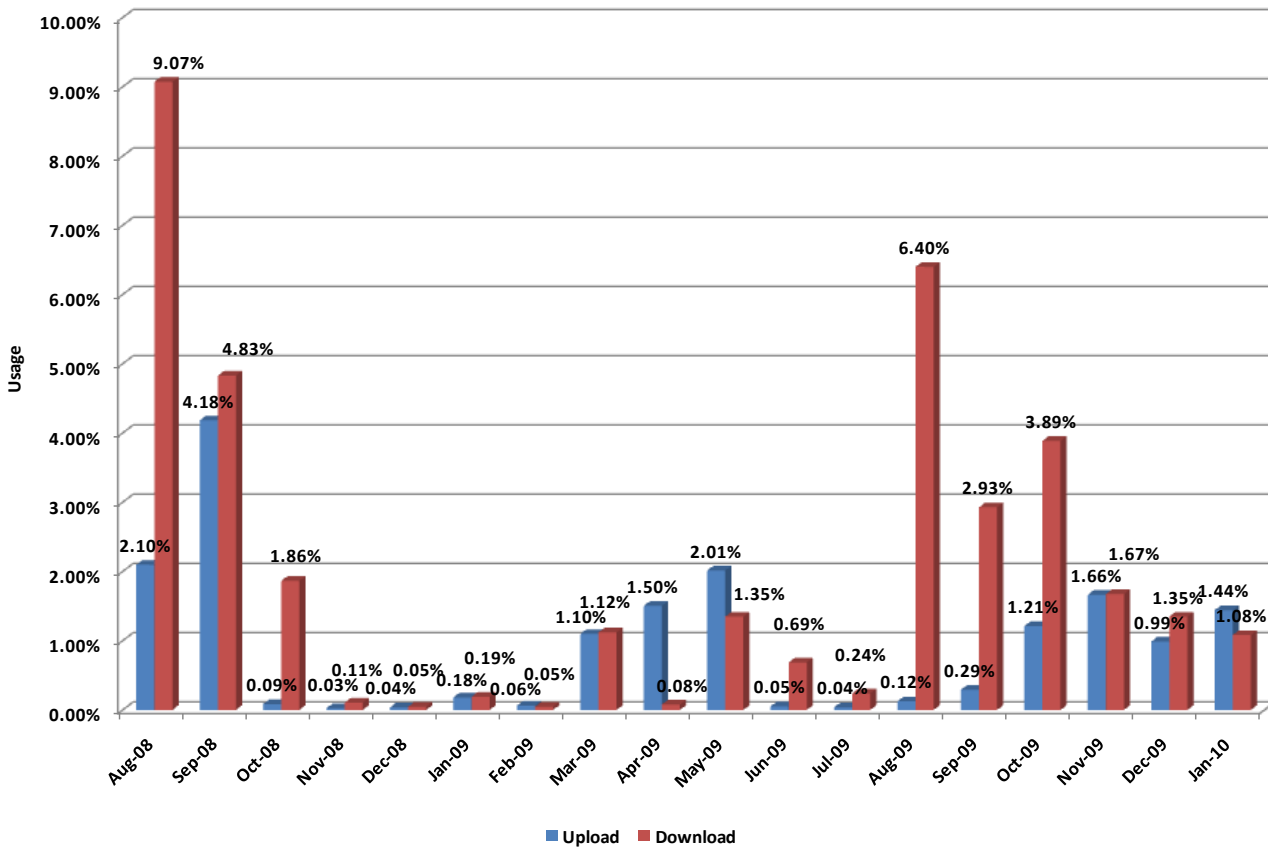
University Center - Sioux Falls - Research Center

Maximum Utilization as a Percentage of a 10 Gbps Lambda



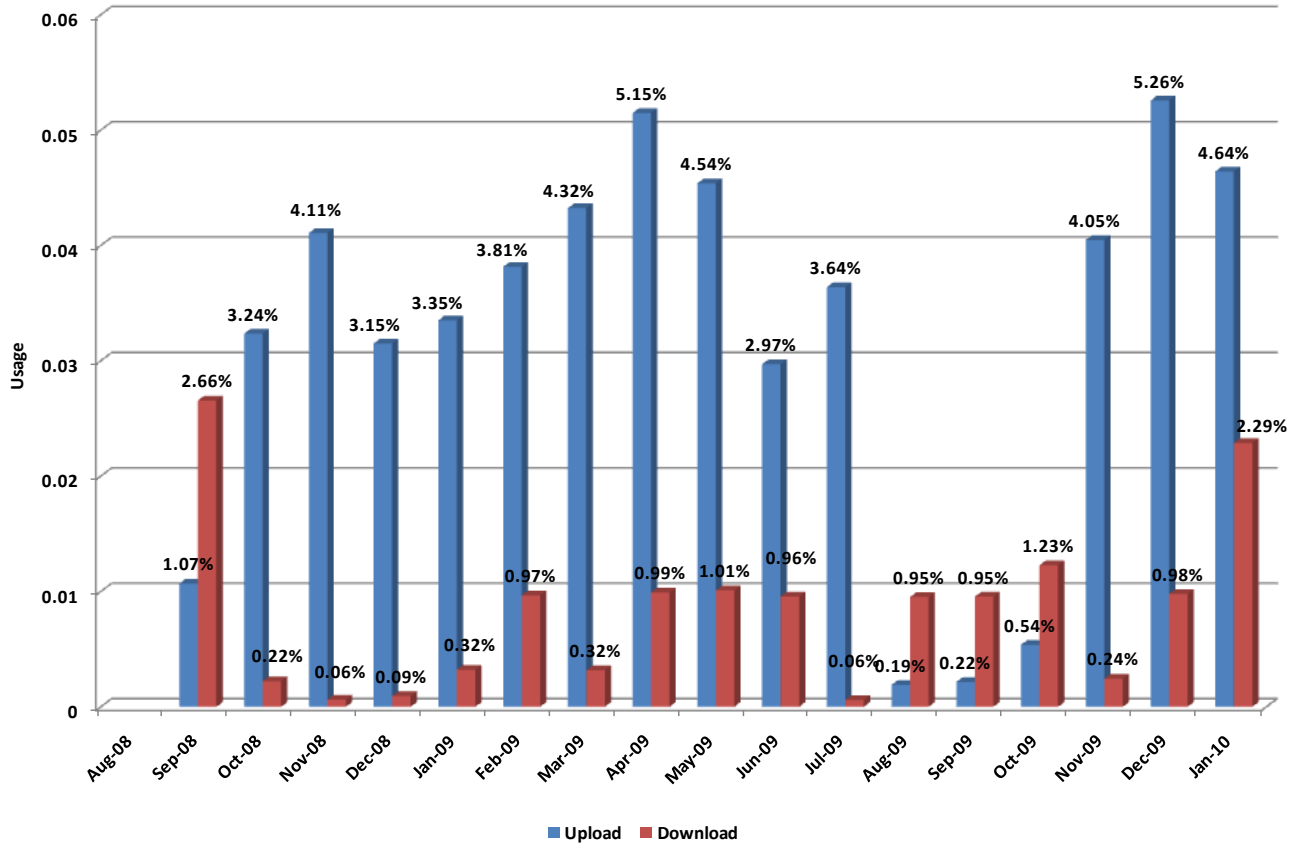
University of South Dakota - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



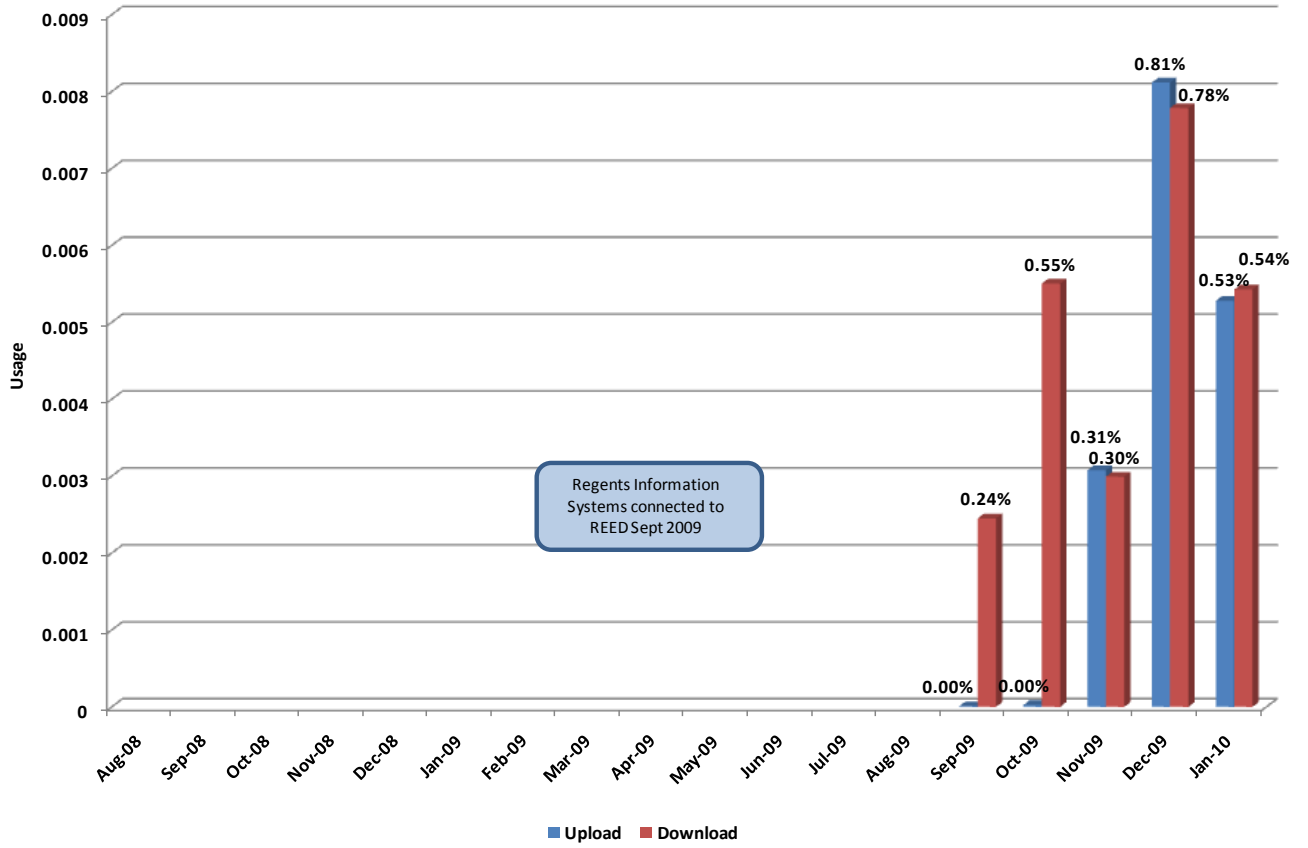
EROS Data Center - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



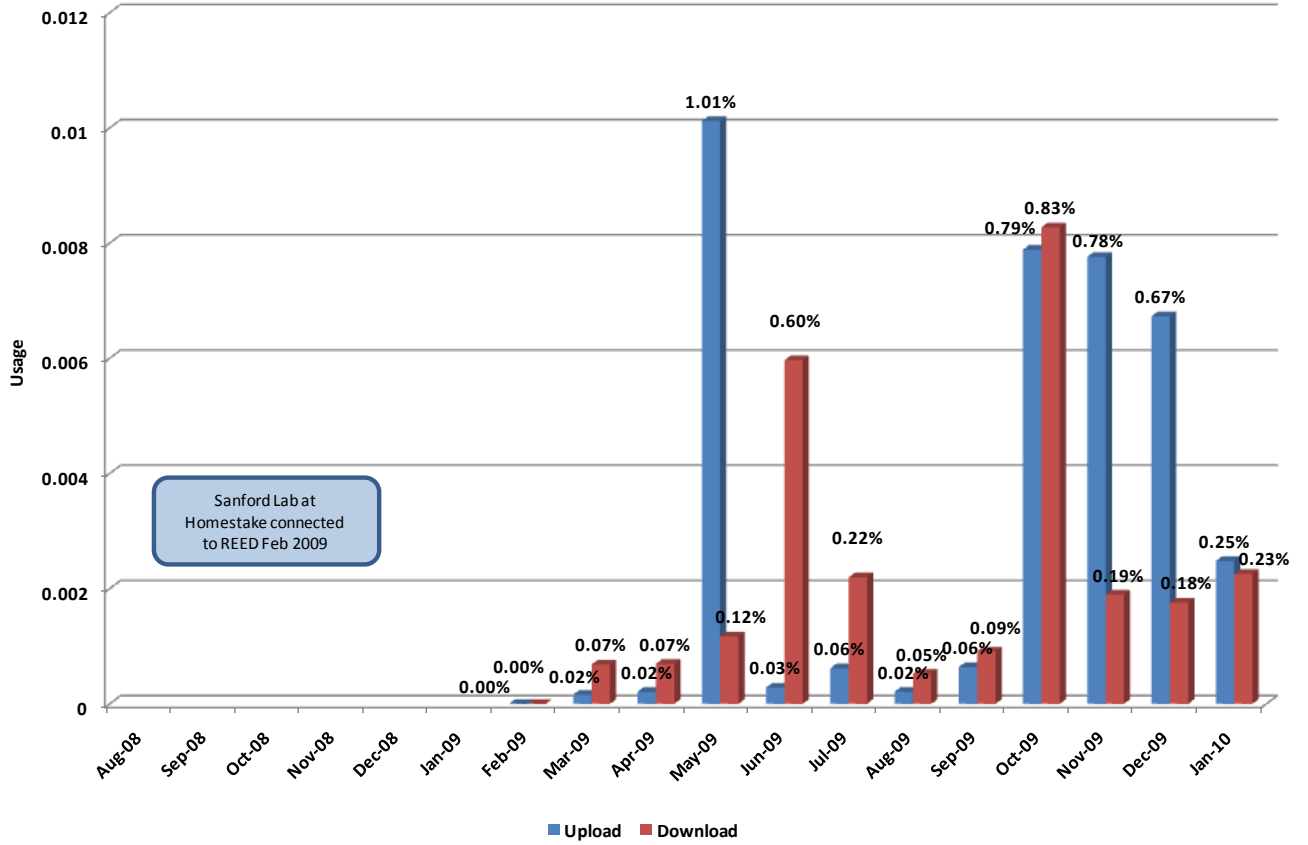
Regents Information Systems - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



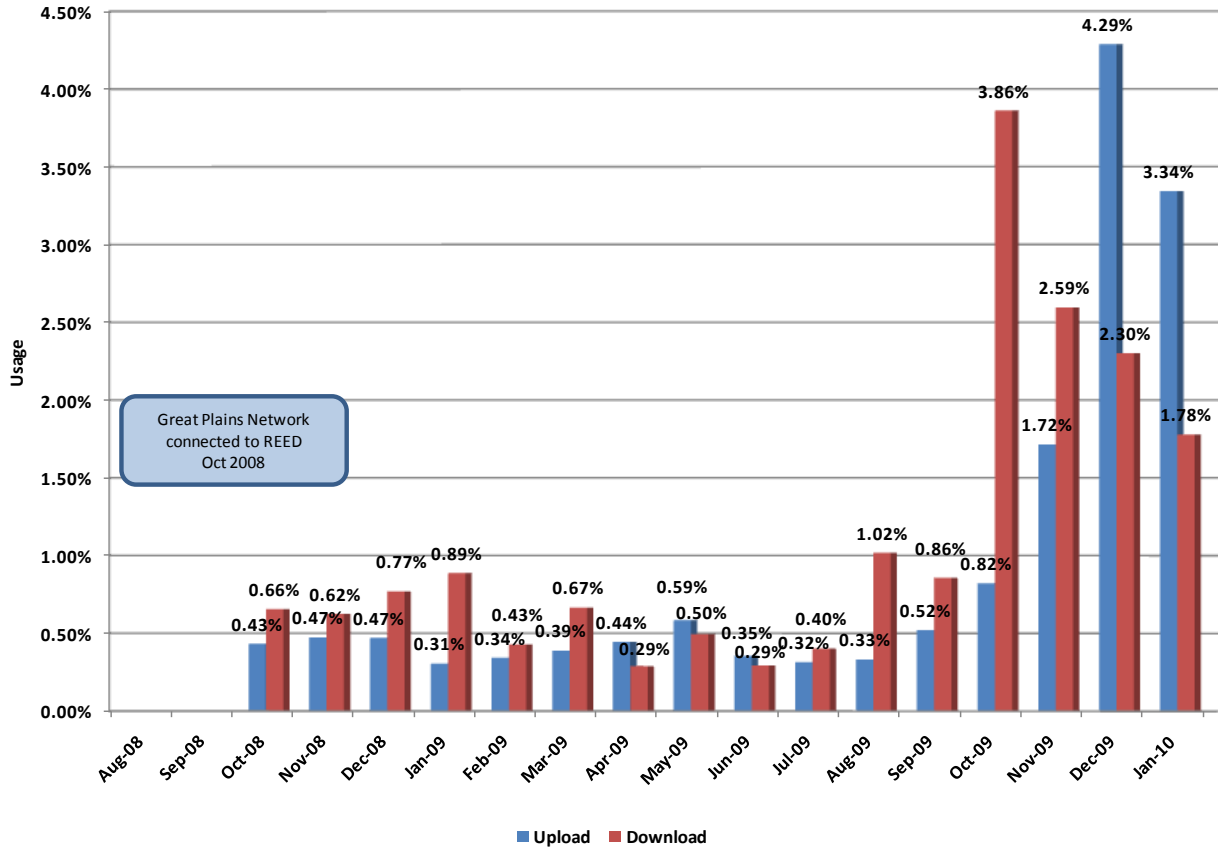
Sanford Lab at Homestake - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



Great Plains Network - Research Connection

Maximum Utilization as a Percentage of a 10 Gbps Lambda



Sincerely,

Otto Doll, Commissioner
Bureau of Information and Telecommunications