

EX. DD

cheaper and better than marketplace decisions made by others.

Actual Events/Impact - For all new connections using any NSF funds, all connections were terminated at Merit/ANS nodes, allowing ANS to own the connection to a foreign market. Free market decisions by non-NSF funded parties were delayed up to 6 months, while NSF insisted on seeking approval from foreign PTTs for these "non NSF connections". Connections from the UK, Germany, Singapore and Korea which involved no NSF funds were denied access to NSFNet for up to six months. According to NSF, this delay was caused by State Department regulations.

Conclusion - NSF has effectively given ANS indirect control over many international connections, while free market connections continue to be delayed.

Decision C NSF approves ANS organization, (and privately authorizes ANS's exclusive use of NSFNet for commercial use) - 1990

Rationale - ANS was formed by the Merit, IBM, MCI team to leverage MCI/IBM equipment, staff, and bandwidth and to position itself for competition in the future. Private ANS meetings with NSF and select Regional Networks, and public comments about a complex shared "infrastructure pool", introduced a packet charging concept (called settlements) which ANS would fund by charging commercial customers attaching through the Regionals. There was no public mention or debate of the exclusive commercial use by ANS, which was the key element of their earlier private agreements with the NSF. Yet, these private agreements between NSF and ANS drove these complex agreements with the Regionals.

Actual Events/Impact - This situation publicly positioned ANS as a not-for-profit, public spirited company willing to share its "profits" with Regional Networks which were willing to sign additional (complex) agreements. NSF approved this subcontracting arrangement without prior public notice, debate, or open bidding. Further, NSF helped provide visibility with press releases quoting Senator Gore and Dr. Wolff.

Once approved, ANS took over the NSFNet leadership from Merit in the marketplace by hosting all negotiations and discussions with Regionals, and issuing policy/contract related statements which represented NSF backing. ANS began competing for commercial and non-commercial customers by telling prospective customers that they could "connect directly to the backbone" without using the Regional Networks, and that they should connect to ANS since "at any time, ANS could disconnect [] or any of the Regionals which had not signed the ANS agreements".

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In 1991, ANS represented itself as the only network which could guarantee full commercial use of the NSFNet. This was true then and is true now. One example of this is Dialog, a large commercial supplier of electronic information to academic, government and commercial users. It appears that ANS first convinced Dialog that it should connect to NSFNet (ANSNet) for "commercial only" traffic. ANS then attempted to use Dialog to attract the Regional Networks to sign the complex ANS connection agreements, preventing those who did not sign from reaching Dialog. Few Regional Networks signed, and when Dialog discovered that it could access fewer than 5% of the Internet users it converted to a normal ANS customer, and agreed to comply with the NSFNet policy of supplying only research and education traffic.

• Conclusion - NSF has thus positioned the ANS/Merit/NSF/IBM/MCI partnership to approach commercial, government, and academic customers with significant advantages no one else can offer, without disclosing this to the public or allowing anyone else to bid.

ANS's handling of Dialog's attachment, and subsequent month long delay in disclosing Dialog's request to change, was seen by many as clear positioning for ANS's for profit subsidiary ANS CO&RE to gain marketshare.

Decision D Upgrade T1 to T3, and Privatize the NSFNet - 1990

• Rationale - Push networking technology to avoid congestion on the T1 backbone. Leverage NSF funds by allowing some private use.

• Actual Events/Impact - NSF negotiated the T3 upgrade arrangement with no apparent technical compliance specifications and no penalty clause for non-compliance. To date, less than half of the T3 nodes are operational beyond test mode, after 15 months of full payments, despite intermittent claims of full operational status by NSF and the contractor.

ANS used IBM-provided T3 equipment which was not the same as that used on the T1, had no significant R&D preparation, and failed when deployed. As during the earlier T1 IBM router design, the commercial R&D on T3 routers had been underway for two years by other router vendors using their own limited funds (eg. Proteon, Cisco) and could have been used. The use of IBM computers produced a poor quality network, and damaged these leading commercial suppliers investment in R&D.

In November of 1990, ANS's president claimed in a public talk at a Harvard workshop that "in essence, we have privatized the NSFNet". Although few understood, he meant that the NSF was now buying its