

# Decommissioning User Magnetic Tape Reading

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- Last December we announced the “**8mm Tape Retirement Plan**”. We have buy-in from virtually all the tape holders but haven’t yet executed this plan.
- We are now planning to retire the NEEDFILE 8mm tape reading facility on December 15, 2010.
  - We can no longer sustain the support of 8mm and the needfile program.
  - Expertise has gone away.
  - We have decreasing numbers of operating drives.
- We’re soliciting input from the users to guide this process.

# Fermilab Data Storage History - 8mm tape

- 8mm tape as an HEP data recording media was pioneered by E791 c1990.
- An Exabyte tape drive was (is) a Sony handheld 8mm video camera converted to a computer tape drive. It has the reliability (and cost) of consumer electronics.
- They were adopted by CDF & D0 Run-I and many 1990's fixed target experiments. 280K tapes are in tape cabinets, now mainly stored at KTeV.
- All are 10-20 years old. Almost none have been read in the last 5 years [1800 from E781(Selex), ~100 from E866].



# FCC capability to read 8mm - NEEDFILE

- Only recent user is E866.
- Maximum capability 100 tapes/month.
- We still have a few spare drives, etc.
- Can contract out tape reading - but at \$100-\$200/tape.



# Fermilab Present Data Storage - Tape Robots

- Tape drives were replaced for Run-II, etc. by networks and tape robots. The first generation of these robots have now been retired.
- We add storage as requirements grow and budgets permit. >24 PB stored today; 20x what's on the 280K 8mm's
  - 1000 PB = 1 Exabyte !
- All data is transparently migrated to new media and robots. The users should never see this. Our plan for the foreseeable future is to keep and migrate ALL user data.
- You ask ENSTORE for your files when you need them (~3Pb/month). Let us worry about where and how we keep them.



# Action Items

- Talk to us now if this will impact you or your experiment.

The era of user tapes is **finally** coming to an end. Hallelejah!

## Acknowledgements

All of us who got our Physics into the journals via magtape had more than a little help.

- Dave Sachs, who retired from the computing division at the end of 2008 after 36 years at the lab, was the father of the NEEDFILE software and many of the even earlier magtape systems (Cybers, CalComp tape robot, ...).
- A small army of computer operators mounted those tapes for us, 24/7.
- Many others in the Computing Division (and Department before that) made these systems go for us, both writing online and reading offline.