DREW'S SLIDE: A CASE STUDY OF
COMPUTER USE IN THE JACKSON HOLE AVALANCHE FORECAST OFFICE

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At 10:03, April 3, 1992, an off-duty Jackson Hole Ski Instructor and a companion, were caught in a backcountry avalanche initiated from above by a third member of their party. The slide carried the instructor, Drew Dunlap, 900 vertical feet over two cliff bands, and buried him 4 feet deep near the toe of the path. His companion was partially buried near the flank of the path. Hasty search teams were unsuccessful in locating the victim. After a little more than an hour, search dog teams were ferried by helicopter to the site. Within ten minutes, the dogs pinpointed the victim and he was extricated soon after. Total time of the burial was 1 hour, 33 minutes. At the time, the rescue was hailed as the first live recovery by dog of an avalanche victim in the United States.

Anytime there is a backcountry avalanche rescue effort of that magnitude staged on Forest Service land, a certain amount of paperwork is generated. In this case, access to the back country was controlled by the Jackson Hole Ski Area, a USFS permittee. The involvement of the Ski Area necessitated a complete review of the conditions which led to the Ski Patrol decision to open the back country that day. The task fell to the Jackson Hole Weather and Avalanche Forecast office, operated by the Ski Area with the cooperation of the Bridger-Teton National Forest. The review emphasized how many uses have evolved for forecast office computer system since Gary Poulsen, then Snow Ranger, introduced his home-built Heathkit M8 to office operations in 1975.

The Jackson Hole Ski Area is one of very few major ski areas using predominantly Apple Corporation hardware.The current computer system in the office is Mac Plus with a 30 megabyte DataFrame hard disk. Hardware is supported by eight software applications with which we implement our information gathering, reporting, and database managing programs. In the case of the April 3, 1992 event,using our historic database mangement tools,we were able to access historic avalanche activity on the slope, applicable snow-pit profiles, and results of recent bomb tests. We also gathered together computer-generated hard copies of morning weather, wind and avalanche forecasts from our reporting system. Then, there was a quick check of the SNOTEL(one of three weather-related mainframes that we consult) to ascertain backcountry temperatures overnight. The final step was to prepare the summary in the word-processing application and fax it through the modem to the appropriate parties.