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For Immediate Release

## SMITHSONIAN RESEARCHERS USE HIGH-TECH DIGITAL IMAGING DEVICE TO STUDY COLLECTIONS

A PaxScan Image Receptor From Varian Medical Systems Speeds Research and Cuts Costs

SALT LAKE CITY — February 13, 2002 — Researchers at the Smithsonian's National Museum of Natural History are using a PaxScan 4030R flat panel digital radiography unit made by Varian Medical Systems, Inc. (NYSE: VAR) to see inside fish and other vertebrate specimens without damaging them, and to share captured digital images with other researchers worldwide.

"The system is used to capture radiographs of specimens digitally without having to use our traditional film-based system," explained Dr. Jeff Williams, Collection Manager in the Division of Fishes, Smithsonian's National Museum of Natural History. "It allows us to capture images that are then used by Smithsonian scientists and sent via email or FTP to researchers around the world."



The PaxScan unit, which generates digital images using X-ray imaging, eliminates the need for film and film processing. It is being used at the Smithsonian to make high-quality digital images of the internal anatomy of fish and other specimens for research and public outreach. At more than 3.5 million specimens, the Smithsonian's fish collection is the largest in the world. The digital images generated can be studied by staff researchers and placed in publications and on public-access web pages.

"This digital X-ray technology gives us radiographic images of research specimens that can be sharpened and magnified on a computer screen to allow more detailed study by staff researchers," Williams said. "We can archive and copy digital images with no loss of quality, whereas film and photos degrade over time." - more -



Williams procured the PaxScan unit from Varian Medical Systems in order to obtain radiographic images efficiently and save costs by reducing staff time and expenditures for film and processing supplies. "The costs of X-Ray film and processing chemicals are continuous. A one-time purchase of reusable storage media for digital images involves no further costs," he said.

Varian's PaxScan flat panel digital radiography technology is also used in numerous industrial and medical settings, from steel mills and jet

engine component factories to hospital oncology, radiology, and neonatal intensive care departments. It incorporates a highly efficient cesium iodide scintillator and an amorphous silicon TFT array to capture high-resolution radiographic images in real time. "Varian's PaxScan products are chosen over competing products and technologies because they are available, reliable, cost effective, and easy to integrate in any PC based system," said Chuck Blouir, marketing manager for Varian's flat panel business.



Prior to installing Varian's PaxScan unit, researchers at the Smithsonian used X-rays and film to capture radiographic images and then digitized the images to send them to outside scientists. "X-ray film is expensive. It takes about half an hour to prepare a single plate," Williams explained. "The PaxScan unit allows us to capture an image quickly, evaluate the image and readjust as necessary, and store it as a digital file. The time savings is a very attractive feature."



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**Varian Medical Systems, Inc.**, (NYSE:VAR) of Palo Alto, California, is the world's leading manufacturer of integrated cancer therapy systems as well as X-ray tubes and flat-panel sensors for imaging in medical, scientific, and industrial applications. Varian Medical Systems employs approximately 2,600 people and reported sales of \$774 million in its most recent fiscal year ended September 28, 2001. The company's X-ray Products business unit is based in Salt Lake City. For more information, visit <u>www.varian.com</u>.