CASE STUDY

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WHEN MEASUREMENTS MATTER

Egypt: Monitoring King Tut's Tomb

Campbell datalogger controls monitoring of conditions at Tutankhamen site

In 1922, when the tomb of Tutankhamen was discovered in Egypt's Valley of the Kings, the tomb was full of treasures, artwork, and other artifacts. In most other tombs that archaeologists discovered, these things had been stolen or vandalized before preservation-minded people could protect them. Up to this day, Tutankhamen's tomb has stayed largely unmolested, and is now one of the most-visited sites in the Valley of the Kings.

The tomb walls are covered with priceless murals, but as time has passed, the paintings have begun to deteriorate. Since the large number of visitors may be contributing to the problem, Egypt's Supreme Council of Antiquities (SCA) and the Getty Conservation Institute are collaborating on a three-phase plan to evaluate and manage the effects of visitors on the condition of the tomb.

Phase 1 includes measuring the microclimate in the tomb and at the site. Sensors measure air temperature, humidity, and carbon dioxide, and count the number of visitors. The data is captured with a Campbell Scientific CR10X datalogger (to be updated to a CR1000 when political conditions permit) and transmitted via cell modem to a land line and

Case Study Summary

Application:
Monitoring environment to help design preservation strategies

Location:
Egypt

Contributor:
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Getty Conservation Institute

Participating Organization:
Supreme Council of Antiquities

Products Used:
CR10X, CR1000

Measured Parameters:
Temperature, humidity, carbon dioxide, visitors

then to the project's headquarters at the Getty Center in California. The data are then posted automatically on the project website.

During Phase 2, the Getty and the SCA will analyze the data and determine what effect visitors have on the microclimate of the tomb, and what effect any changes in the microclimate have on the deterioration of the tomb paintings. They will then design strategies to manage these factors and their effects.

Phase 3 will entail implementing new procedures, and continuing to monitor the microclimate to gage the effectiveness of the visitor-management strategies. The caretakers of the tomb will also continue to study ways to preserve the tomb and the murals for the future.