The CoreWall Project
Core Visualization, Stratigraphic Correlation and Rich Media Distribution
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Introduction
The CoreWall Suite is a National Science Foundation-supported collaborative development for a real-time core description (Corelyzer), stratigraphic correlation (Correlator), and data visualization (CoreNavigator) software to be used by the marine, terrestrial and Antarctic science communities. The overall goal of the CoreWall software development is to bring portable cross-platform tools to the broader drilling and coring communities to expand and enhance data visualization and enhance collaborative integration of multiple datasets.

CoreWall suite provides a set of tools for coring scientists to observe and analyze geological cores through high resolution imagery and physical sensor data. It helps scientists efficiently construct the overall mind map and generate more research ideas while the coring expedition is happening with high-resolution visualization and flexible interactivity.

In 2008 Corelyzer began working with International Continental Scientific Drilling Project's (ICDP) Drilling Information System (DIS) and Paleontological Stratigraphic Interval Construction and Analysis Tool (PSICAT) to standardize on an interoperable data exchange format. The format is based on XML and allows DIS to expose the collected recovery data to client applications like Corelyzer and PSICAT. Corelyzer will be able to visualize the imagery downloaded from DIS server and export the user generated interpretation annotations back to DIS.

We will also be working on "Rich Media Core Archive" for core data distribution with management flexibility. The JPEG 2000 format provides both feature-preserving high compression ratio encoding and advanced features like multi-resolution and multi-tile imagery delivery. With the ability to embed XML data files, we can include not only geospatial metadata but also geometry features, data logs and interpretations into a self-contained JPEG 2000 core section archive file. We hope it will be useful to both scientists and educators in the classroom environment.

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Corelyzer Window
Correlator Window
Rich Media Core Archive

Enhancements to Visual Stratigraphy Correlation
The function of visual stratigraphy correlation has been further enhanced to allow two pieces of software in the suite Correlator and Corelyzer to work side-by-side with both data logs and high-resolution imagery.

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