## The Data Repository System for The Shake Test

"E-Defense" is a 3-D full-scale earthquake testing facility. Shake tests at the facility can observe and investigate strength of various types of buildings against earthquakes. "EDgrid Central" system supports storing and publishing experimental data of the shake tests, by the IT technology. The system enables civil engineering researchers to access the experimental data securely through the Internet. The researchers can share results and reports of analyses of the experiments with researchers of various fields, and would promote their collaboration.

## Measuring E-Defense facility **EDGrid Central system** Sensors (960ch) Management service Cameras (27ch) HD cameras (2ch Data Repository service repository Streaming service Metadata addition Meta Account Web interface DBUser tools Remote researchers

Figure: Overview of EDgrid Central system

Information Tachnolog

## **Overlay Weaver: An Overlay Construction Toolkit**

We have been developing an overlay construction toolkit called "Overlay Weaver". Algorithm designers can implement structured overlay algorithms in just hundreds of lines of code with the toolkit and improve them rapidly by iterative tests on a single computer. The toolkit enables designers to make fair and large-scale comparisons between new and existing algorithms. Furthermore, the implemented algorithms can work on a real network in addition to the emulator. The toolkit enables algorithms developed through research to be used in applications directly.

Application

| Application | Contents | Cont

Figure 1: Components of runtime in Overlay Weaver

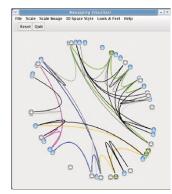


Figure 2: Messaging visualizer

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