MediaWarehouse

Integrating Multimedia Data Through X

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MediaWarehouse Paper

An updated version of the MediaWarehouse proceedings paper is available on my WWW site:

http://www.rahul.net/kenton/index.shtml

MediaWarehouse

- Based on X, Motif, and ViewKit
- Organizes users’ multimedia data
- Data can include anything user regularly uses

Outline

- User interface
- Features (focus on X–based features):
  – data interchange
  – media viewer framework
  – persistent database
- Reusability and interoperability

User Interface

media viewer

shelf selector

data objects

Data Objects

- Main concept in user interface is the *data object*
- Data objects are:
  - typed
  - organized into *shelves*
  - persistently stored in database
- Selected data object shown in viewer

Data Interchange

- Files
- ICCCM data interchange:
  - X primary selection
  - X clipboard
  - Motif drag–and–drop
- Type, size, name information saved when data objects are imported

Target Types

- Target types cover major media formats
- 70 new target types proposed for ICCCM
- Examples:
  - images: `XBM`, `TIFF`, `JFIF`, `GIF_89`
  - audio: `AIFF`, `AIFF_C`, `NEXT`, `WAVE`
  - movie: `APPLE_QUICKTIME`, `MPEG_1_SYSTEMS`
  - 3D: `INVENTOR_2_0`, `VRML`, `PIXAR_RIB`
  - web: `HTML`, `URL`

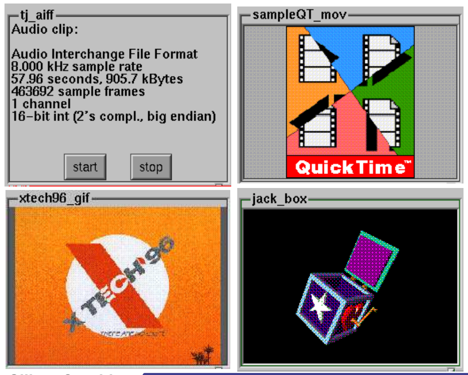
Automatic Conversions

- Golden Gate automatically converts data formats during ICCCM interchange
- Implemented in Motif and Xt libraries
- Extensible framework
- Douglas Rand, "GoldenGate Automatic Conversion," *The X Resource*, Issue 16, December, 1995.

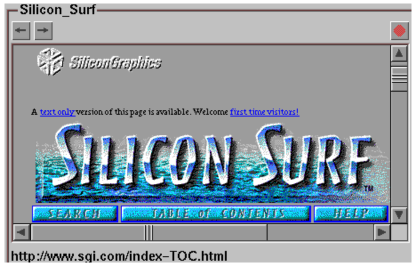
Viewer Framework

- Lightweight, type specific, in–line viewers
- Viewers are shared objects that are loaded at run–time when needed
- Framework is extensible via Xrm
- Compatible with Netscape plug–ins

Some Viewers



Another Viewer



Database

- Stores data objects persistently between user sessions
- Searching by name or keyword
- Changes automatically saved using X Toolkit timer

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Reusability

- Viewer framework shipped as a library
- Target types proposed for ICCCM
- GoldenGate shipping with SGI X Toolkit and Motif, can also be called directly

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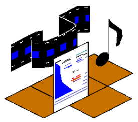
Conclusion

- Simple, easy–to–use, Motif GUI
- ICCCM data interchange, extended with GoldenGate
- Extensible viewer framework
- Persistent database



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The Author

Kenton Lee is an independent software consultant working. This work was done under contract with Silicon Graphics' User Interface Technology Group.

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