(re)Mixing (big)Data

Interdisciplinary Visual Art Collaborations

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For:

AHRC - Digital Transformations in the Arts & Humanities
Big Data Workshop. London. 25/06/2013
Data_COSM: VRML + JAVA + FLASH: 2005
Rhythmic Space(s) - Wind Dance: Second Life + Great Hall, Hellerau: CYNetArt, DE: 2007
¿IKON?: DIGITAL VIDEO: 5-CHANNEL INSTALLATION + URBAN SCREEN, LEICESTER SQUARE, LONDON, UK: 2001
Michael Takeo Magruder is an artist and researcher in King’s Visualisation Lab, located in the Centre for Computing in the Humanities, King’s College London. His artworks have been showcased in over 200 exhibitions and 30 countries, and embrace a wide-range of New Media, including high-performance computing, networked systems, mobile devices and virtual environments. His work seeks to blend Information Age technologies with modernist aesthetics to explore the formal structures and conceptual paradigms of our networked, digital world.

For further information please visit: www.takeo.org
ADDRESSABLE MEMORY: SOLO TOURING EXHIBITION: FUNDED BY ESMÉE FAIRBAIRN FOUNDATION: 2007-8
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MICHAEL TAKEO MAGRUDER
(RE)MEDIATION_S  2000 - 2010

WWW.TAKEO.ORG / PROJECTS / REMEDIATIONS
‘Maker’ of Things

?
'Maker' of Things

~

'Remixer' of Culture
CULTURE OF (BIG) DATA
Artistically Investigating Big Data

= Interdisciplinary Collaboration
Case Study I

‘Living’ Media Repositories
Data Flower (prototype 1) : with D. Baker and E. Fleming : VRML + Java : 2010
Generative Floral Art Using Artificial-Life Algorithms
A-Life ~ Deterministic (static code)

vs

R-Life ~ Non-Deterministic (static code + changing environment)
Data Flower (Prototype 1): Deterministic A-Life 'Genetic' Codes

```javascript
DEF PetalChange Script {
    eventIn SFTime watchTime
    eventOut MString urlChanged
    eventOut MFVec3f set_keyValue
    url "javascript:
    function watchTime() {
        var p = Math.floor(Math.random() * 100);
        var PP = (p < 10) ? '0' + p : p;
        urlChanged[0] = 'ns034_0' + PP + '.jpg';

        var X = Math.random() + 1;
        var A = 1.0 + Math.random() / X;
        var B = 1.2 + Math.random() / X;
        var C = 1.3 + Math.random() / X;
        var D = 1.5 + Math.random() / X;
        var E = 1.8 + Math.random() / X;
        var F = 2.0 + Math.random() / X;
        var G = 3.0 + Math.random() / X;
        var H = 3.5 + Math.random() / X;
        var I = 4.0 + Math.random() / X;
        var J = 7.0 + Math.random() / X;

        var K1a = new SFVec3f(0.0, 0.0, 0.0);
        var K1b = new SFVec3f(0.5, 0.5, 0.5);
        var K1c = new SFVec3f(0.5, 0.5, 0.5);
        var K1d = new SFVec3f(0.5, 0.5, 0.5);
        var K1e = new SFVec3f(0.5, 0.5, 0.5);

        var K2a = new SFVec3f(0.0, 0.0, 0.0);
        var K2b = new SFVec3f(0.5, 0.5, 0.5);
        var K2c = new SFVec3f(0.5, 0.5, 0.5);
        var K2d = new SFVec3f(0.5, 0.5, 0.5);
        var K2e = new SFVec3f(0.5, 0.5, 0.5);

        var K3a = new SFVec3f(0.0, 0.0, 0.0);
        var K3b = new SFVec3f(0.5, 0.5, 0.5);
        var K3c = new SFVec3f(0.5, 0.5, 0.5);
        var K3d = new SFVec3f(0.5, 0.5, 0.5);
        var K3e = new SFVec3f(0.5, 0.5, 0.5);

        var K4a = new SFVec3f(0.0, 0.0, 0.0);
    }
```
Data Flower (Prototype 1): Non-Deterministic 'Environmental' Factors
Data Flower (prototype 1) : with D. Baker and E. Fleming : VRML + Java : 2010

HTTP://WWW.TAKEO.ORG/NSPACE/NS034/VRML_1024X768.HTM
Case Study . II

Scientific Concepts & Contexts
Data Sea v1.0: with D. Baker, J. Jarvis and D. Steele: VRML + Java: 2009
Star Data: SIMBAD Astronomical Database: http://simbad.u-strasbg.fr/simbad/

SIMBAD Astronomical Database

Queries
- basic search
- by identifier
- by coordinates
- by criteria
- reference query
- scripts
- TAP queries
- options

Documentation
- User's guide
- Query by urls
- Nomenclature Dictionary
- Object types
- List of journals
- Measurement description
- Spectral type coding
- User annotations documentation

Information
- Presentation
- Acknowledgment

Content
The SIMBAD astronomical database provides basic data, cross-identifications, bibliography and measurements for astronomical objects outside the solar system.

SIMBAD can be queried by object name, coordinates and various criteria. Lists of objects and scripts can be submitted.

Links to some other on-line services are also provided.

Statistics
- Simbad contains on 2013.06.24
- 7,250,790 objects
- 18,006,839 identifiers
- 282,223 bibliographic references
- 9,813,031 citations of objects in papers
The Exoplanet Data Explorer is an interactive table and plotter for exploring and displaying data from the Exoplanet Orbit Database. The Exoplanet Orbit Database is a carefully constructed compilation of quality, spectroscopic orbital parameters of exoplanets orbiting normal stars from the peer-reviewed literature, and updates the Catalog of nearby exoplanets.

A detailed description of the Exoplanet Orbit Database and Explorers is published here and is available on astro-ph.

In addition to the Exoplanet Data Explorer, we have also provided the entire Exoplanet Orbit Database in CSV format for a quick and convenient download here. A list of all archived CSVs is available here.

Help and documentation for the Exoplanet Data Explorer is available here. A FAQ and overview of our methodology is here, including answers to the questions "Why isn't my favorite planet/datum in the EOD?" and "Why does site X list
Scientifically Abstract Information to Tangible and Visceral Experience
Case Study . III

Cultural Digital Archives
Cultural Archives: ...to Digital Repositories
ARTWORK AS INTERFACE
+
UNCOVERING NARRATIVE
INTERNET DATA MINING TO ARCHIVE

• INTERNATIONAL NEWS MEDIA ORGANISATIONS
• USER-GENERATED INFORMATION/MEDIA REPOSITORIES (Flickr, Wikipedia, YouTube, etc.)
• BLOGS (BOTH PERSONAL & ORGANISATIONAL)
• TORRENT SITES & PEER TO PEER NETWORKS
ETHICS + (BIG) DATA

..? Access ..
..? Control ..
..? Exploitation ..
..? Manipulation ..
..? Ownership ..
..? Privacy ..
..? Rights ..
..? Subversion ..
..? Suppression ..
Big Data in the 1940s...