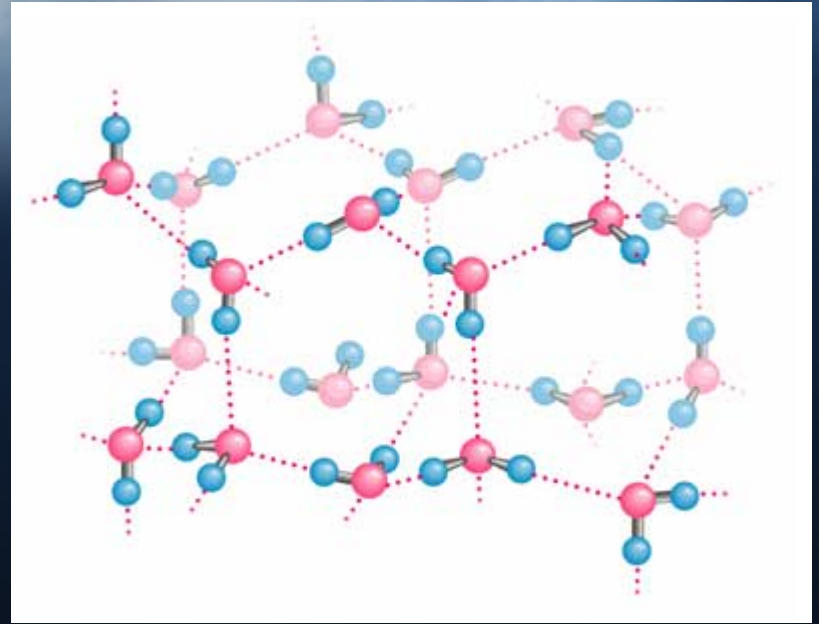
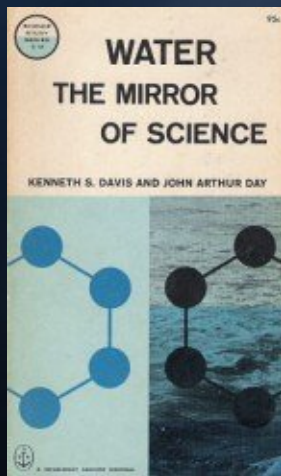


Visualization of Marine Models: Water in Motion

The Water Center

October 13th 2009

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Human Interface Technology Lab



The Importance of Water

- Everyone knows that water is essential to human life.
- But what of the challenges to water quality, the need to protect it, and the underlying scientific principles?
- How do we impact water as a global community?
- How do we impact water as individuals?
- WHAT ? ... I have an impact ?



Global Warming



Climate Change



Water Crisis

Relevant Movies :

- *An Inconvenient Truth*
- *The Age of Stupid*
- *Encounters at the Edge of the Word*
- *Rivers and Tides*

Why Visualization ?

A challenge to our understanding of nature is that we don't always see the underlying processes

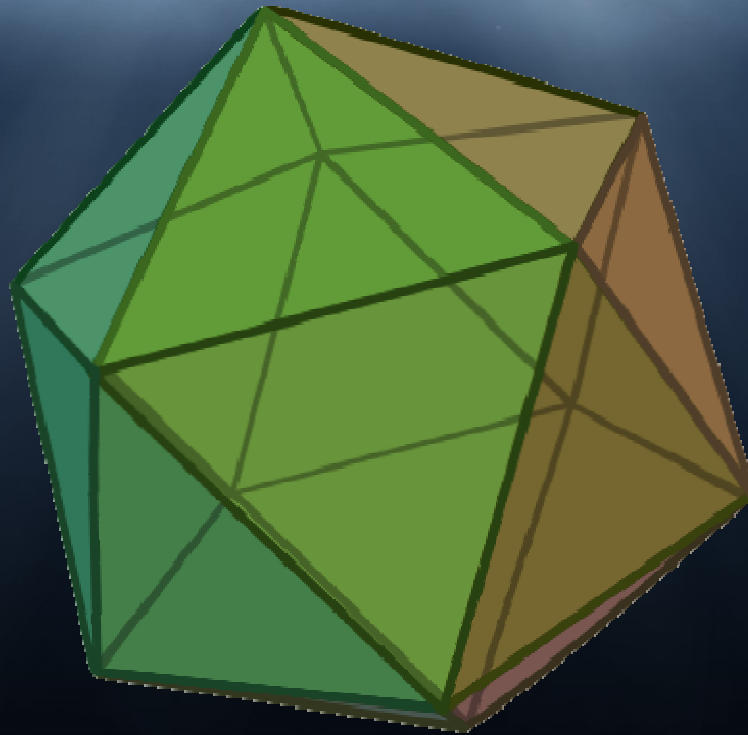
Visualization of Marine Models:

- Increases our understanding of marine processes and the effect of human activity and policy on the environment.
- Facilitates the creation of scientific hypotheses.
- Extends our understanding to reach a larger audience including policy makers, students and the general public.

Visualization Demos







http://books.google.com/books?id=hCmz41VxFqEC&dq=felix+klein+the+icosahedron&printsec=frontcover&source=bl&ots=rJAW6Yiv-C&sig=Ww8UydRTuiPbApLtY8L_d8Jz8tA&hl=en&ei=SoLRSpr7Opl6sQPG0tTvCw&sa=X&oi=book_result&ct=result&resnum=5&ved=0CBgQ6AEwBA#v=onepage&q=&f=true

<http://ia310815.us.archive.org/1/items/vorlesungenber00kleiuoft/vorlesungenber00kleiuoft.pdf>

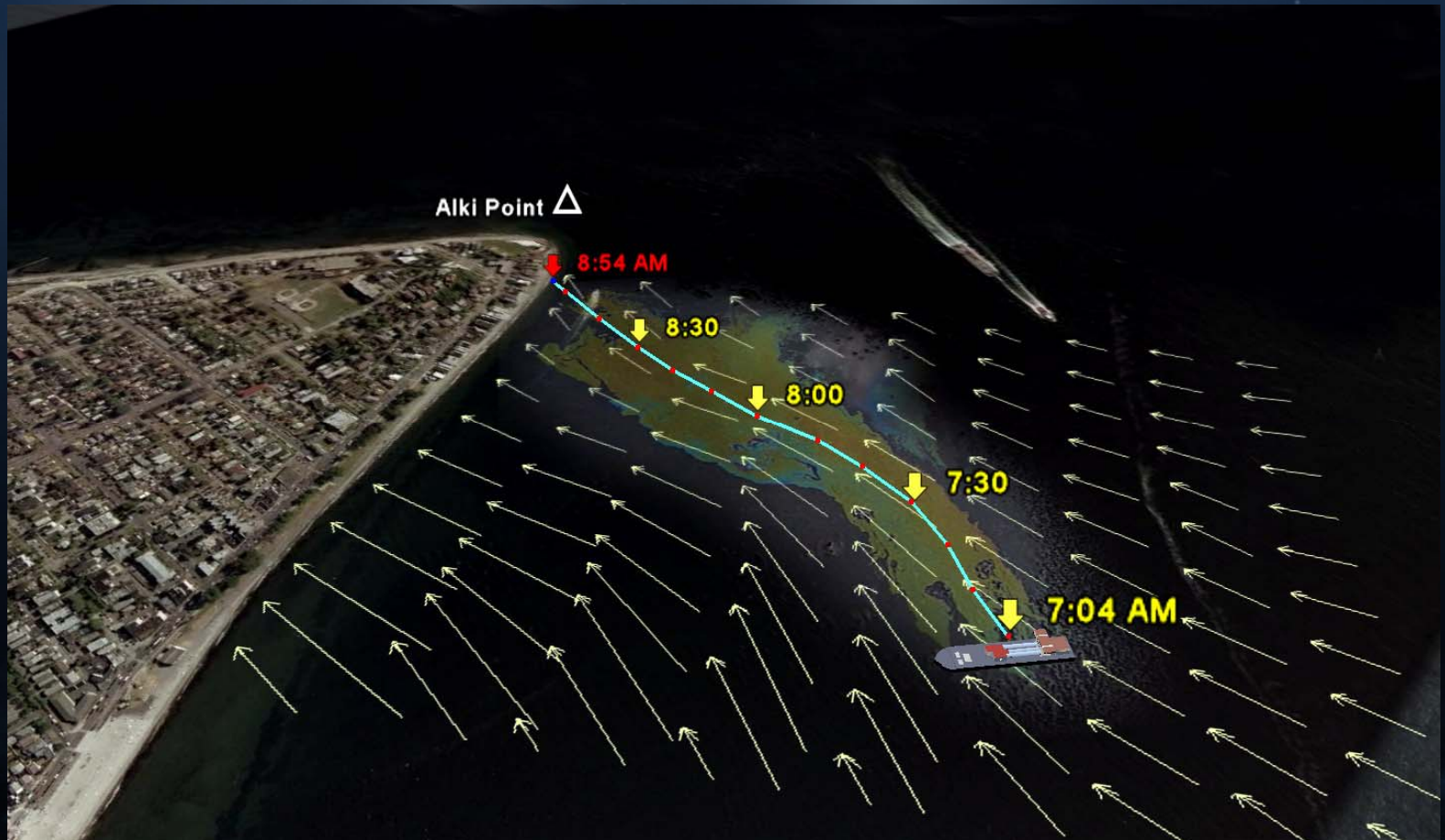
Earth Visualization Platforms

- Google Earth
- Microsoft Virtual Earth
- NASA Worldwind
- UW COVE

The background of the slide is an underwater scene. At the top, there is a bright, hazy area representing light rays filtering down from the surface. The water is a deep, dark blue. In the lower half of the image, there are several glowing, ethereal shapes that resemble bioluminescent organisms or perhaps abstract representations of data points from a model. These shapes are a lighter, cyan-blue color and have a soft, glowing aura around them. The overall composition is vertical and centered.

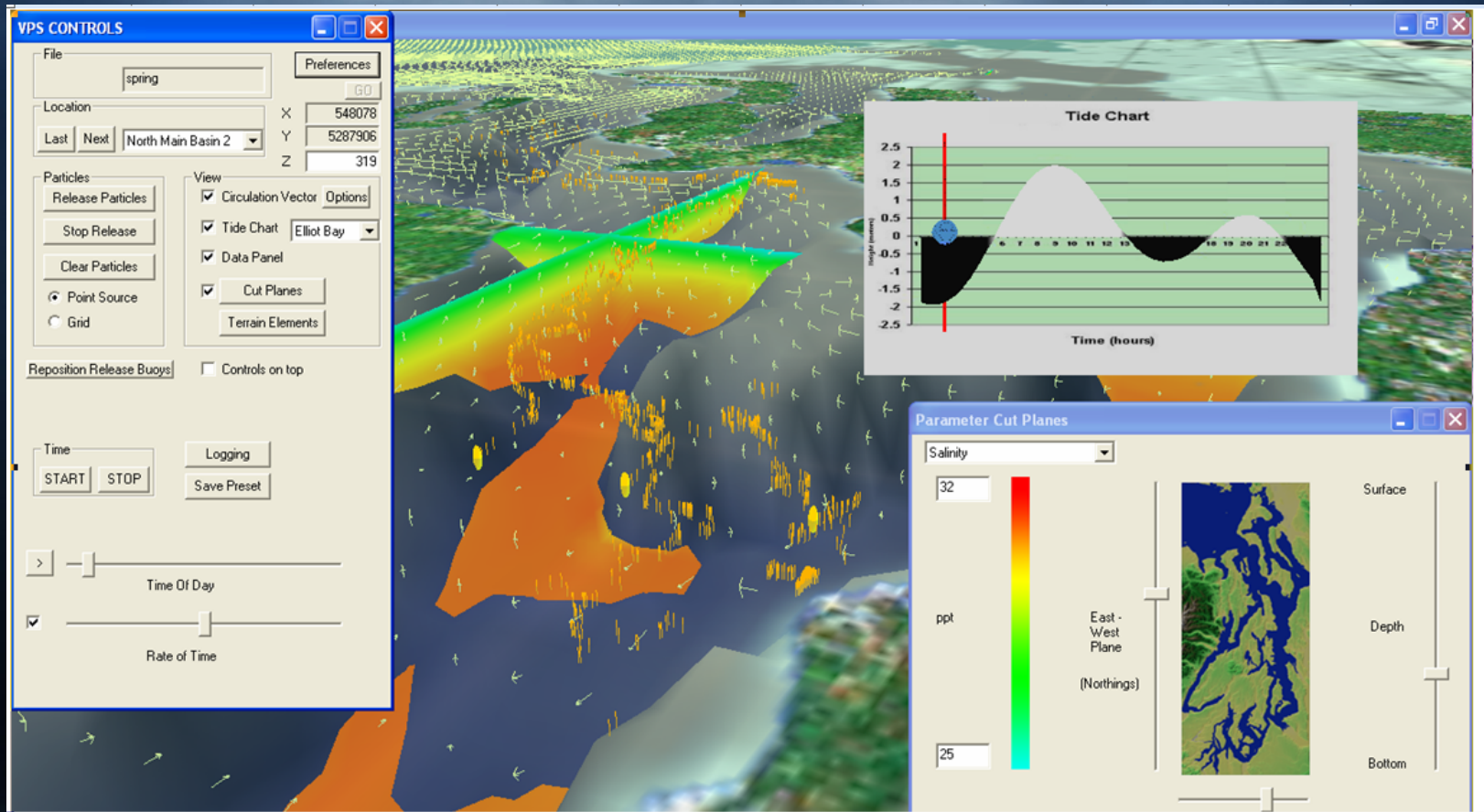
Visualization of Marine Models

Increases our understanding of marine processes and the effect of human activity and policy on the environment.



Rendering of oil spill visualization in Google Earth

Facilitates the creation of scientific hypotheses.



Virtual Puget Sound 3D visualization package

Extends our understanding to reach a larger audience including policy makers, students and the general public.



Visualization in the classroom

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