EKT

Education and Knowledge Transfer Objectives, Progress & Plans

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EKT Topics

o **Education of CSDMS modelers**
o **Knowledge transfer to industry/federal agencies**

o **Educational Repository**
o **Focus on Undergraduates?**
o **What about General Public?**
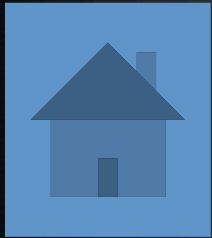
o **EKT short-term and long-term goals**

Modeler Education

SedFlux Model Home with downloads, installation and input explanations, and issues discussion

NEEDS TO BE SOLICITED FROM CSDMS MEMBERS
CSDMS EKT SPECIALIST & WEBMASTER FORM LIASONS

Modeler Education

Help on CSDMS page, account management, help with software and tools downloads, installation and input explanations for the CSDMS GUI.

**CSDMS SOFTWARE ENGINEERS &
EKT SPECIALIST FORM LIASONS**

Educational Repository

Objective: distribute model simulations, educational presentations, reports, publications, short course material and the CSDMS hosted workshops

This repository has been started, but major expansion between 2009-2011.

Teaching Materials now contain lectures of 2 modeling courses and model excercises. Intented for download for teaching faculty, movies and animations of model results.

Models of three textbooks are served in model repository.

Educational Animations

o **Well-documented model movies to explain surface-dynamics processes. Every movie has a short description, and more detailed explanation, key words.**
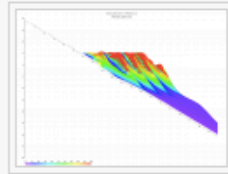o**Fit into the data-base like structure in wiki.**

Ashton and Murray Model, Coastal Evolution of Wave-dominated coast
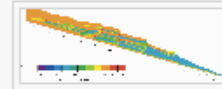
Educational Animations
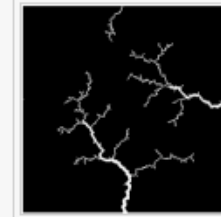
Educational Animations

Basic model experiments, stepping up in complexity.
Fit into the data-base like structure in wiki.

Basic Plume
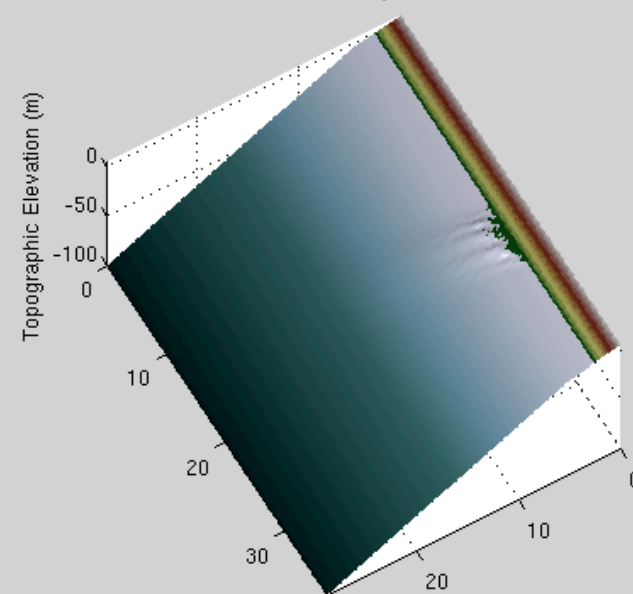
High Switch Frequency

Associated Algorithms is key for learning processes as well as model sensitivity
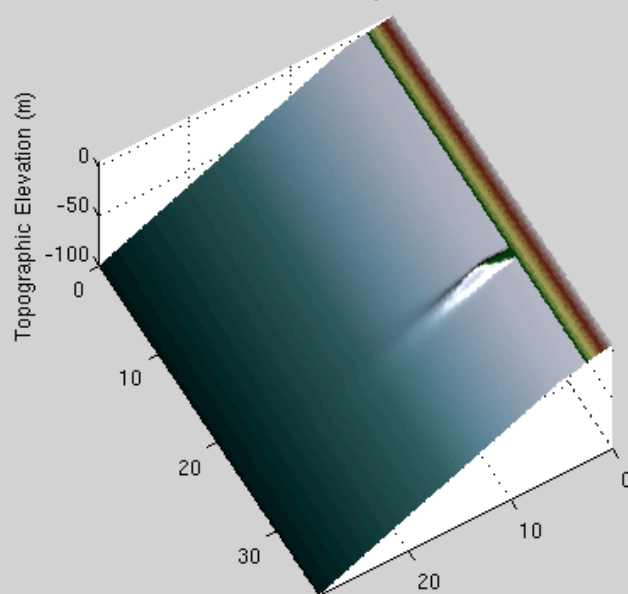
Educational ESP Movies

o   **Well-documented real-world to explain surface-dynamics processes. Every movie has a factsheet, and more detailed explanation, key words.**

Arctic Coastal Erosion

-Summer of 2008, time-lapse coast observation

- Warming permafrost and longer sea-ice free Arctic Ocean promote rapid coastal retreat

-- Discussion and Recommended Reading

-- Authors: Cameron Wobus (CIRES), Irina Overeem, Bob Anderson, Nora Matell (INSTAAR), Gary Clow, Frank Urban, Ben Jones (USGS)

Short-term Goals

o **Really good examples of model labs to showcase educational modules, every WG 1 example:**

   GC2D-HYDROTREND-CEM-PLUME

1) Models can be run stand-alone through Ccaffeine GUI

2) Users can set few key parameters, run & download output

3) Help on models is available through links to wiki

BIG IDEAS ON EKT

- **Series of model labs with added process complexity**

-Develop EKT modeling framework so that it can keep improving and growing. Tool for module use and student assessment for individual teachers.

- **'GOOGLE Earth' like application that set your model input-conditions automatically streamed.**

-Publish in educational journals

-Surface Processes Animations for Science Museum and NP's