

# **Advanced Application of the DRM**

*<http://www.sedris.org/drm.htm>*

**SEDRIIS Technology Conference  
7 January 2004  
Lake Buena Vista, Florida**

**Paul Berner, Ph.D.  
SEDRIIS Core Team**

**[berner@consultant.com](mailto:berner@consultant.com)**

**Kevin Trott  
Northrop Grumman  
Information Technology  
[kevin.trott@ngc.com](mailto:kevin.trott@ngc.com)**

**Louis Hembree, Ph.D.  
Naval Research Laboratory  
Monterey  
[hembree@nrlmry.navy.mil](mailto:hembree@nrlmry.navy.mil)**



# About this tutorial

---

## **DESCRIPTION**

This tutorial covers the effective application of the DRM for modeling of domain-specific environmental data, such as terrain, atmosphere, ocean and space. Advanced topics in handling tabular data, gridded data, ocean features, air/atmosphere features, hierarchy and classification, attribution of effects, raster and vector data, terrain features, along with examples will be covered.

## **WHO SHOULD ATTEND**

Environmental modelers and software engineers who are experienced users of SEDRI, interested in the newest developments as well as future advancements.

## **PREREQUISITE**

Familiarity with environmental modeling will be helpful. Prior attendance at the "Fundamentals of the DRM" tutorial is recommended.

## **WHAT TO EXPECT**

At completion, the attendee should gain a working understanding of the various techniques for use of the DRM in modeling or converting domain-specific data sets into SEDRI.



# Prerequisite

---

**To get the most from this tutorial, we assume you know the following information as a prerequisite to this session:**

- **A solid understanding of the SEDRIIS technology components and how they fit together. We assume you have attended: “*Fundamentals of the DRM* ” and know how it relies on the EDCS and SRM.**
- **Familiarity, or at least a basic knowledge, of common environmental modeling techniques, common environmental data, and data representation approaches.**
- **A basic understanding of object-oriented design techniques.**



# Agenda

---

**8:30 - 8:35 Paul Berner**

## **Introduction**

**8:35 - 9:35 Kevin Trott**

## **Terrain Representation**

**9:35 - 11:00 Paul Berner**

## **Ocean Environment: Mapping to the SEDRIIS Data Representation Model**

*10:00-10:30 Break*

**11:00 - 12:00 Paul Berner, for Louis Hembree**

## **Atmosphere Representation**



# Agenda

---

**8:35 - 9:35 Kevin Trott**

## **Terrain Representation**

- Raster Data
- Gridded Data
- Vector Data
- Polygonal Data



# Agenda

---

9:35 - 11:00 Paul Berner (with break)

## **Ocean Environment: Mapping to the SEDRI Data Representation Model**

- In depth review of Data Tables
  - Property Tables
  - Property Grids
  - Examples in the Ocean Domain
- Ocean “Features”
- Hierarchy & Classification



# Agenda

---

**11:00 - 12:00 Paul Berner, for Louis Hembree**

## **Atmosphere Representation**

- Mapping data to SEDRI
  - Key parts of the SEDRI DRM
- Example atmospheric mappings
  - Property Grids (Forecast Grids)
  - Surface Observations
  - Radiosondes
- GRIB to STF conversion software