Units for Today

Unit 1 – Overview of VRM

Unit 2 – Site Planning

Unit 3 – Design and Mitigation Experience

Unit 4 – Project Analysis and Contrast Ratings

Unit 4B – Simulations - Visualizations

Units for Today

Unit 1 – Overview of Two Systems

Unit 2 - Looking at Landscapes

Unit 3 – Project Planning and Visuals

Unit 4 – Design Fundamentals and Strategies

Unit 4B - Simulations

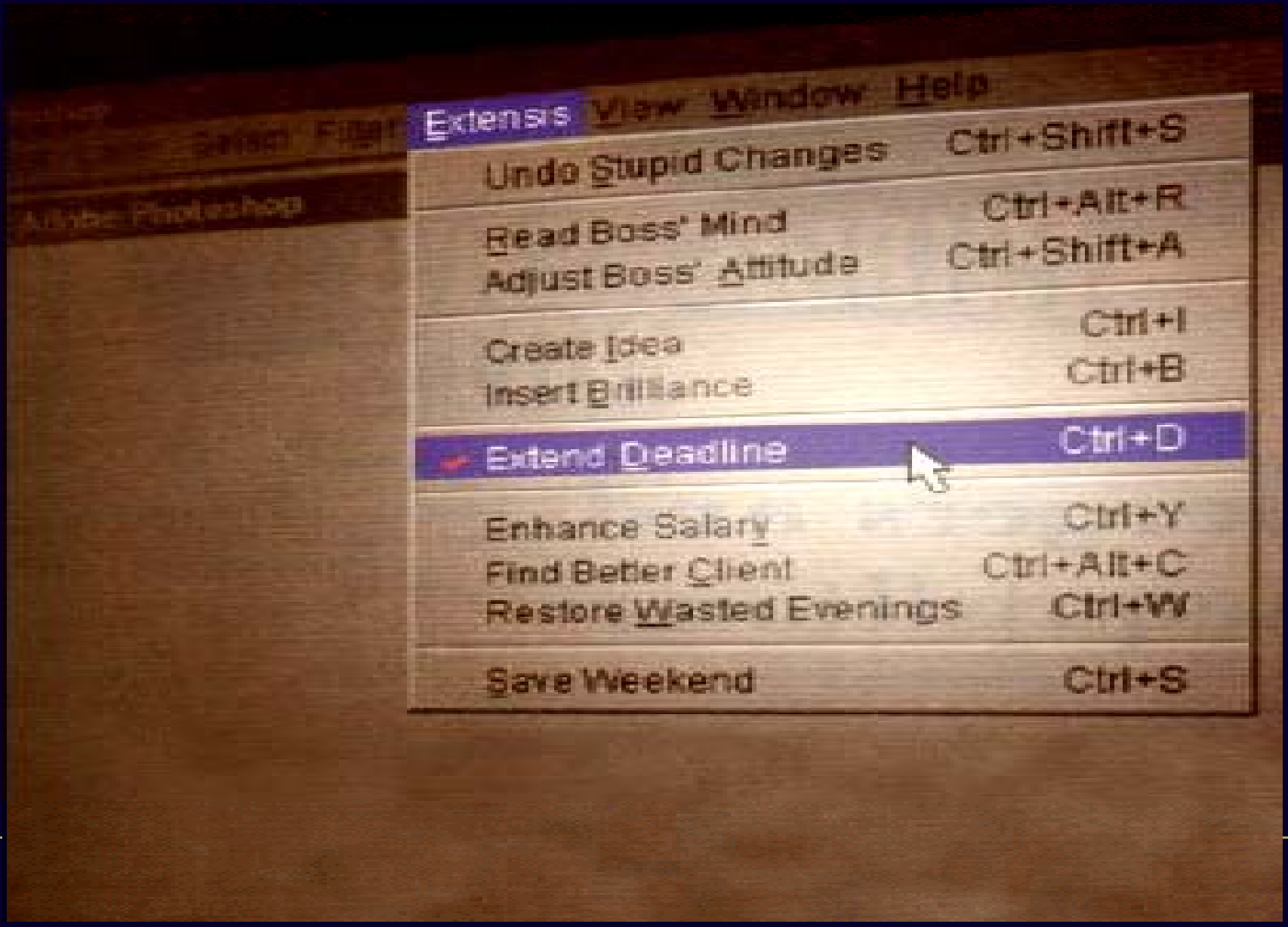
Unit 5 – Environmental Factors

- Contrast Rating Process
- Writing EAs

Visualization

Applications for Federal Land Management

Limitations of technology



Visualizations

- **Definition…**
- **Uses…**

Types….examples…pros/cons

  - Traditional vs. Computer-Generated
  - 2d Image Editing
    - Adobe Photoshop
  - **Training**
  - **Summary**

Visualization…. What is it?

Before

After

Visualization…. What is it?

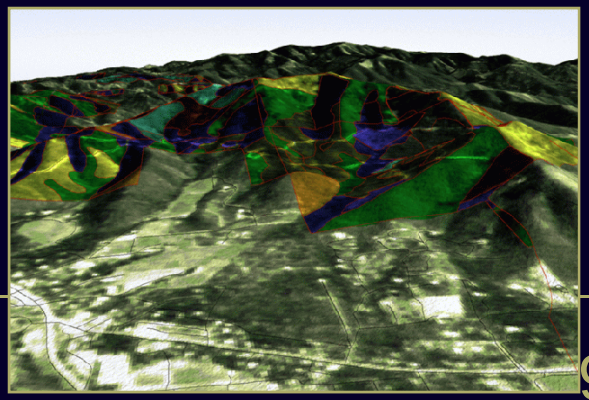
FEDERAL LAND MANAGEMENT AGENCIES:

Historically: The use of illustrations, photographs, and computer-generated images designed to communicate the visible changes to the environment as a result of management activities or decisions.

Visualization…. What is it?

What are the uses?

- Environmental consequences
  - Visual Resource Management (Contrast-ratings)
- Mitigation studies
- Negotiations with project proponent
- Engage the public
- Internal communication
- Landscape level planning
  - Land Use Plan and Activity

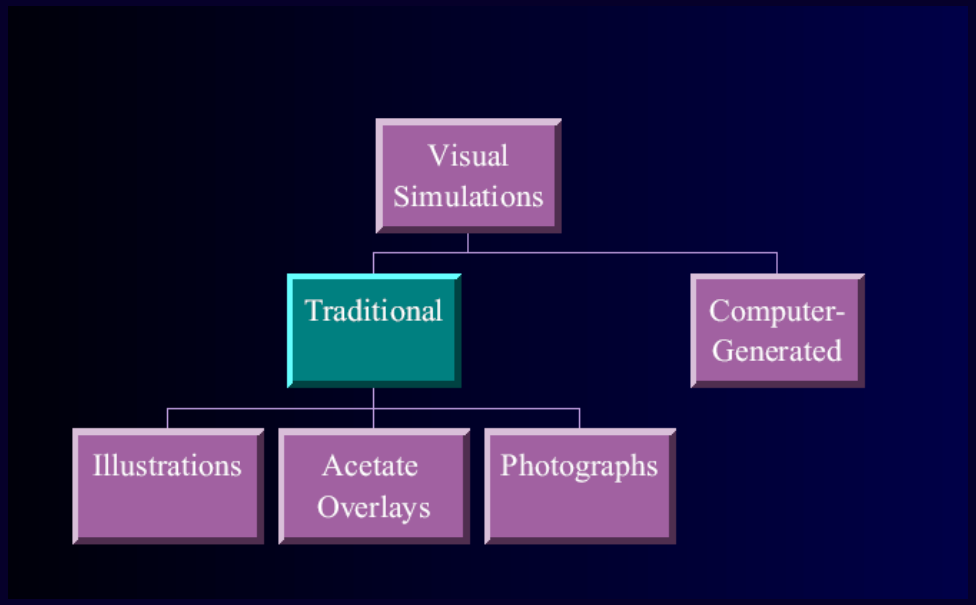


So What? Why Use Visualization?

- Design tool - in development of a project
- Analytical tool –
- Informational device in presentations
- To obtain input toward a project
- As documentary evidence

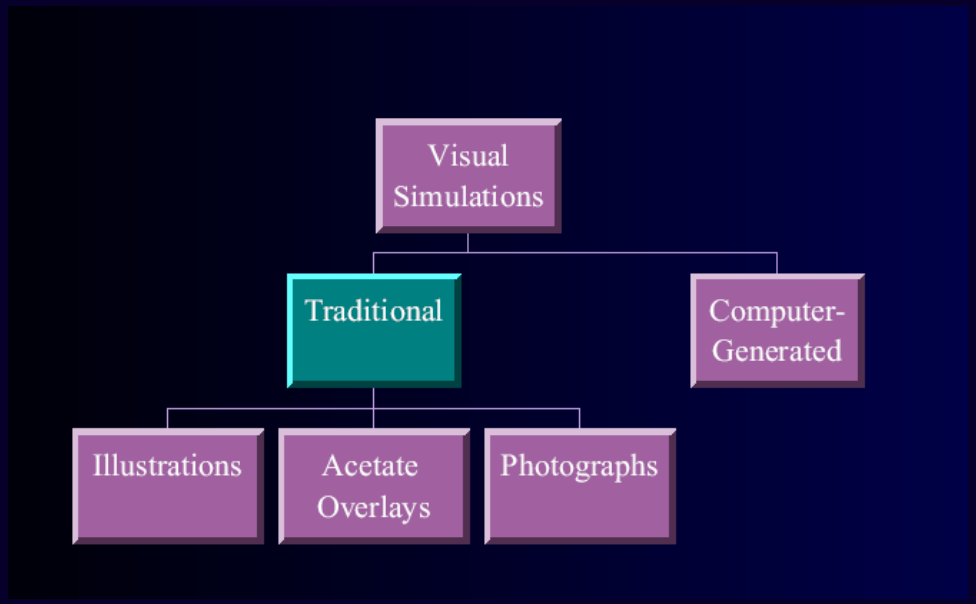
Visualization- Examples

Traditional/ Photographs



Visualization- Examples

Traditional/ Photographs



Visualization- Types

Photographs- Changes over Time

Visualization- Types

Photographs- Changes over Time

Visualization- Types

Photographs- Changes over Time

Visualization- Types

Photographs- Changes over Time

Visualization- Types

Photographs- Changes over Time

Traditional Visualizations

Using Photographs: Summary

- It IS reality
- Connects loop w/monitoring
- No graphic expertise necessary; IN-House
- May be best "bang for buck"
- Requires time commitment and follow-up

Taking Photographs

Helpful Hints

- Keep a photo log – when, where, time of day
- Brace yourself or use a tripod
- Use shutter speeds of 1/60 or faster
- Use 50 mm lens – closely approximates eye
- Print film is good – scan it back at the office
- Take lots of photos
- Sun should be at your back if possible
- Identify key observation points – take photos from there.
- Remember to take the "after" photos

2d: Photoshop Basics

2d: Photoshop Basics

2d: Photoshop Basics

2d: Photoshop Basics

2d: Photoshop Examples

Existing Situation

Expanded Pipeline

2d: Photoshop Examples

Existing Situation

Buried Pipeline

2d: Photoshop Examples

2d: Photoshop Examples

2d: Photoshop Examples

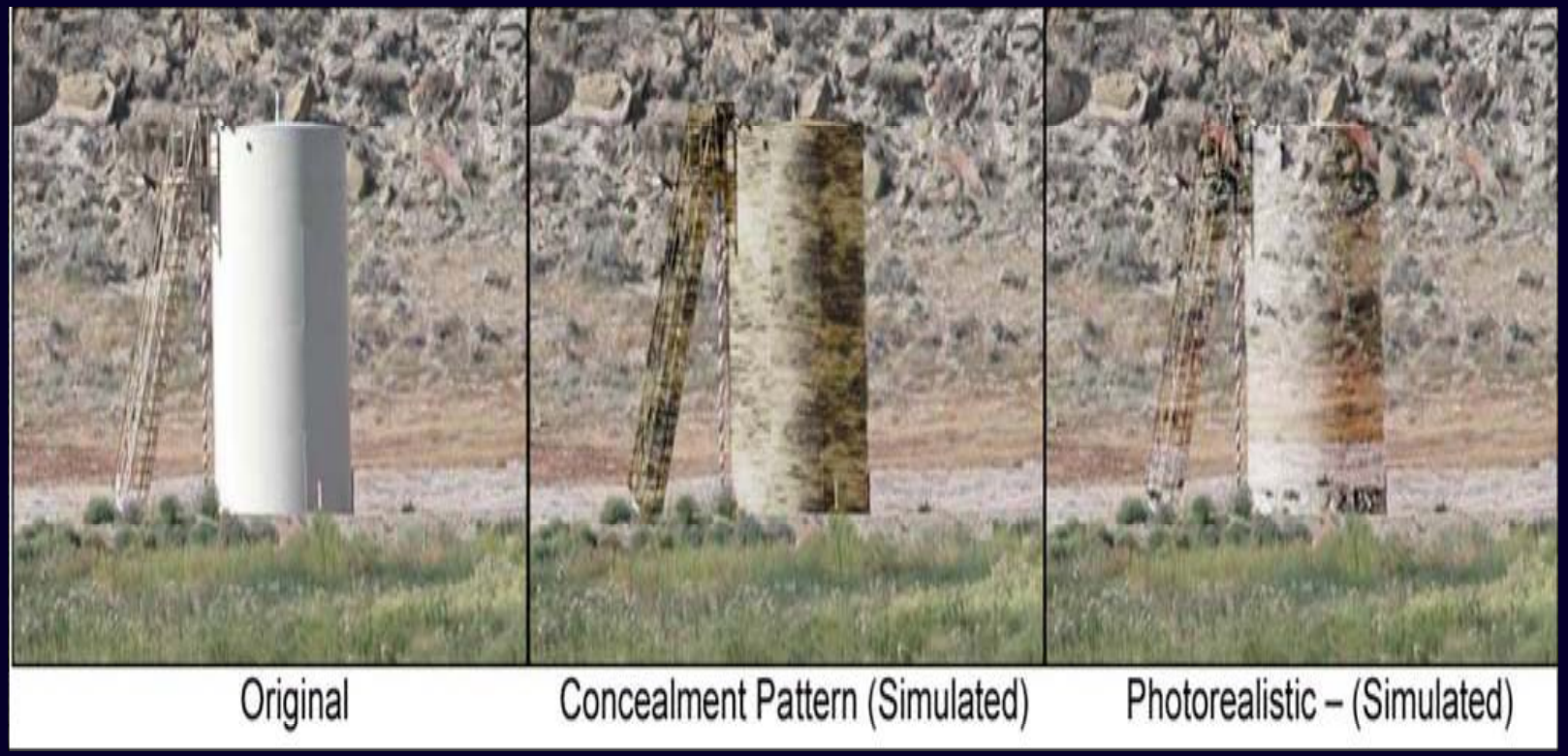
Existing Situation

2d: Photoshop Examples

Simulation: Short-term

2d: Photoshop Examples

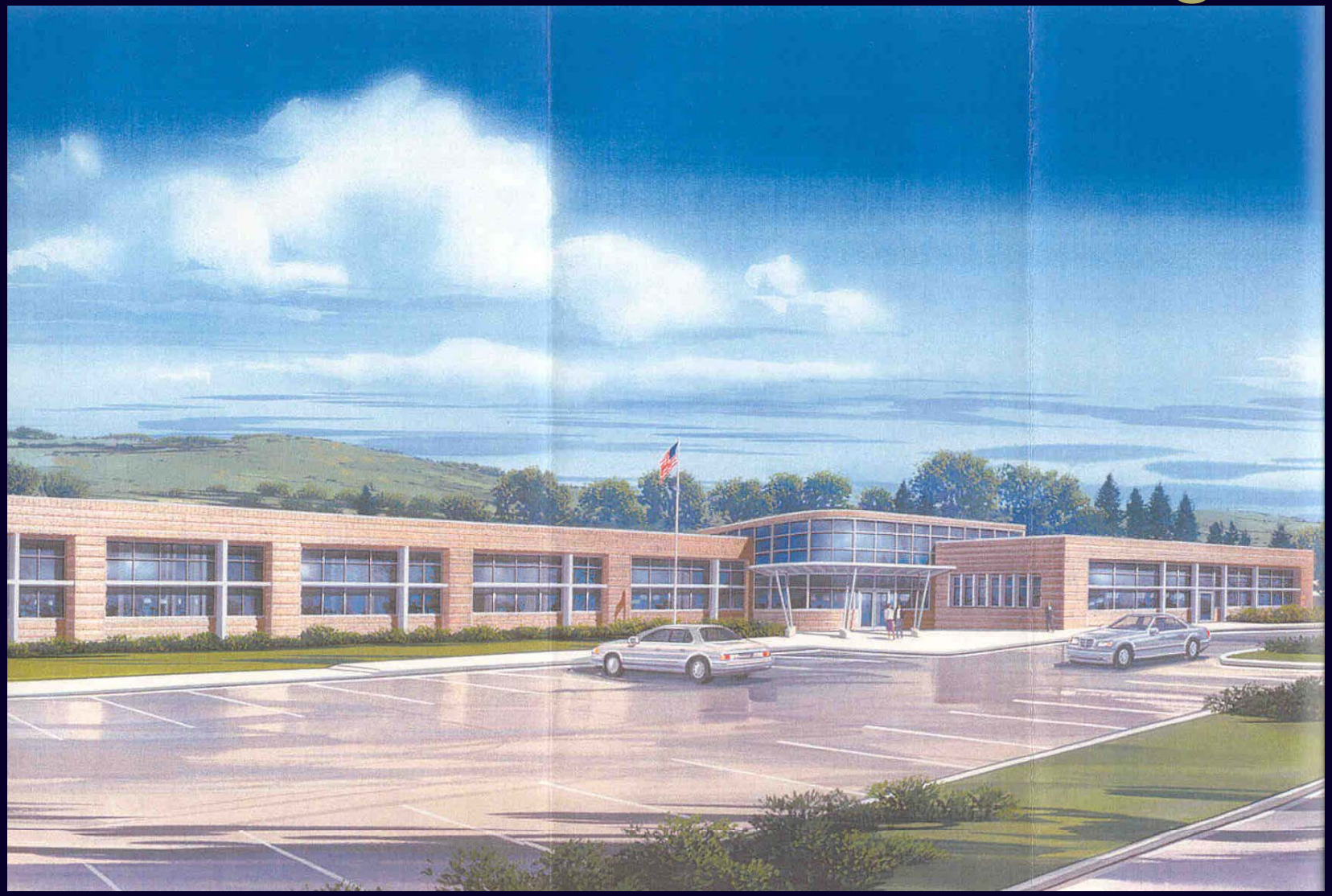
Simulation: Long-term


Original
Concealment Pattern (Simulated)
Photorealistic – (Simulated)

Original

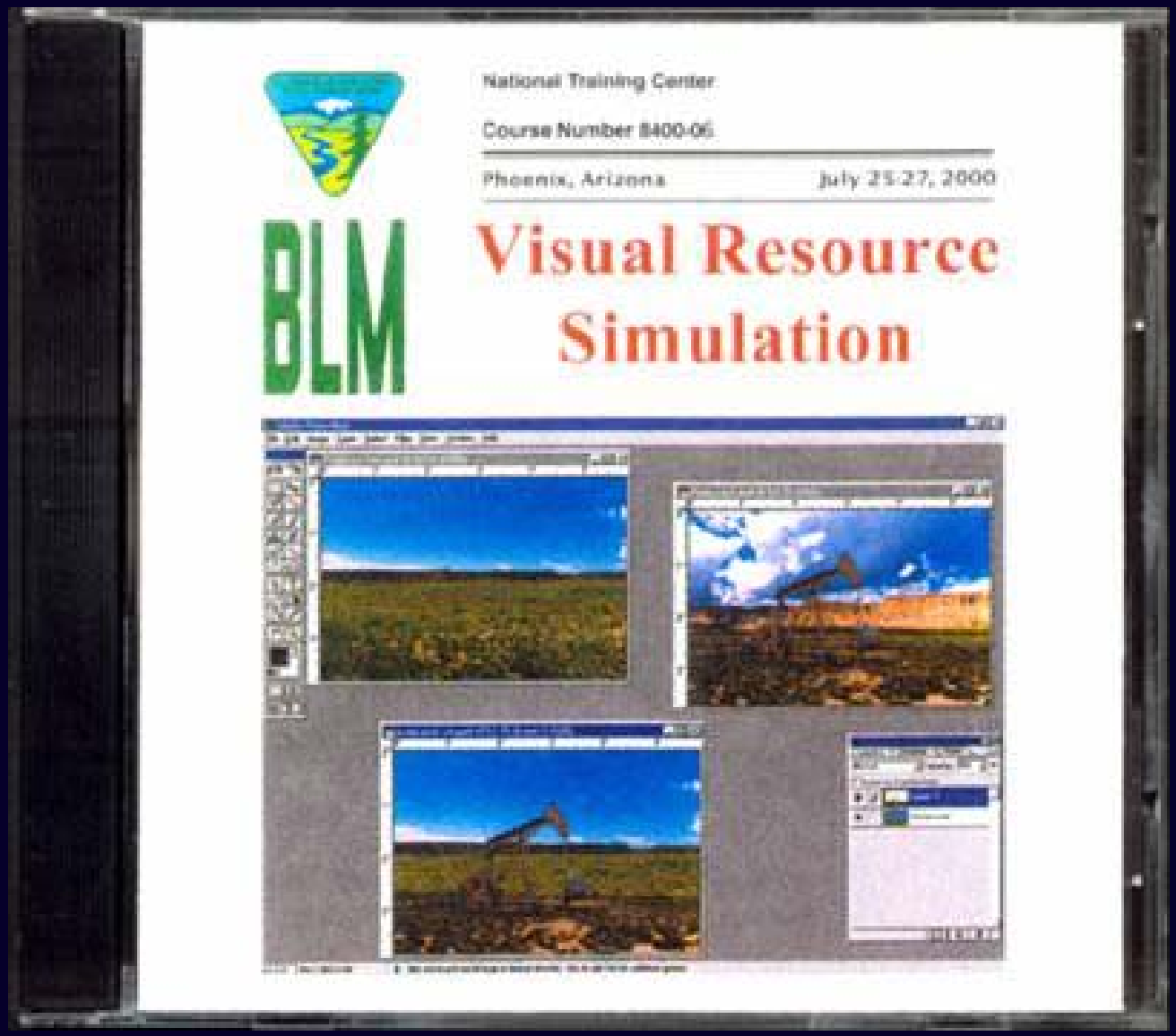
Concealment Pattern (Simulated)

Beware of Artistic Renderings



As Built

Visual Simulation 8400-06 March, 2009, NTC



Cut and Paste Exercise

- Simulation video
- What tips did Alex give?

Now it is your time

Class Exercise – “Adobe White Out Shop”

- Given a photograph of landscape
- After reviewing video
- Place power plant, road, tipple and coal in the landscape

Tools

- Whiteout
- Black marker
- Scissors

Visualizations- Summary

- Use in combination
- Contract vs. In-house
- Spatial Relationships
- Disclose environmental consequences …VRM
- Graphically illustrate land use allocations/ decisions
- Establish dialogue
- Better informed decisions
- Build credibility

Examples of What not to do!

“Everything is connected to everything else … the complex and interdependent relationships between the land, air, people, and animals.” *Aldo Leopold*