

2004 TIPS Geospatial Conference

What's new at Carlson Software?

Steve Richards



- Company Update
- AutoCAD Update
- Data Collection Update
- SurvCADD Update
- Machine Control Update



At Carlson Software We're Getting Bigger!

- Grew by 50% in 2004
- Added 17 people – Now over 50 employees
- Added an office in Australia
- Preparing to release SurvCADD 2005
- 5 New SurvCADD Modules
- Carlson Explorer (SurvCE/Jett CE) Bundle is doing very well
- We still dominate the US Coal Industry
- Integrating GPS Equipment Guidance Applications together with the Project Design for both mining and construction markets



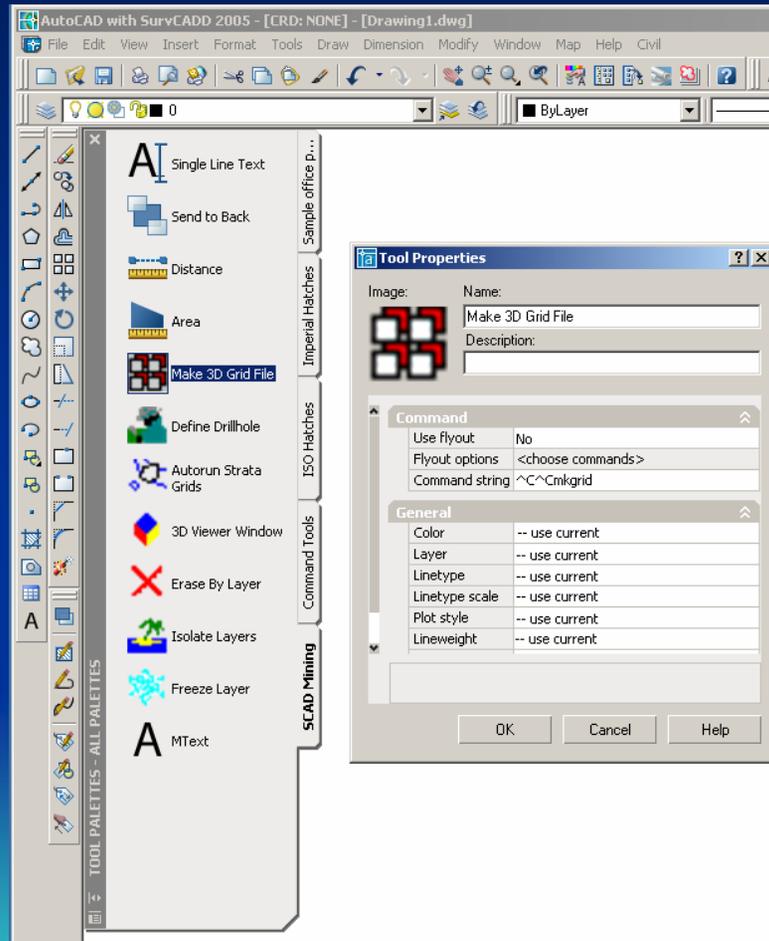
AutoCAD 2005

What's New?

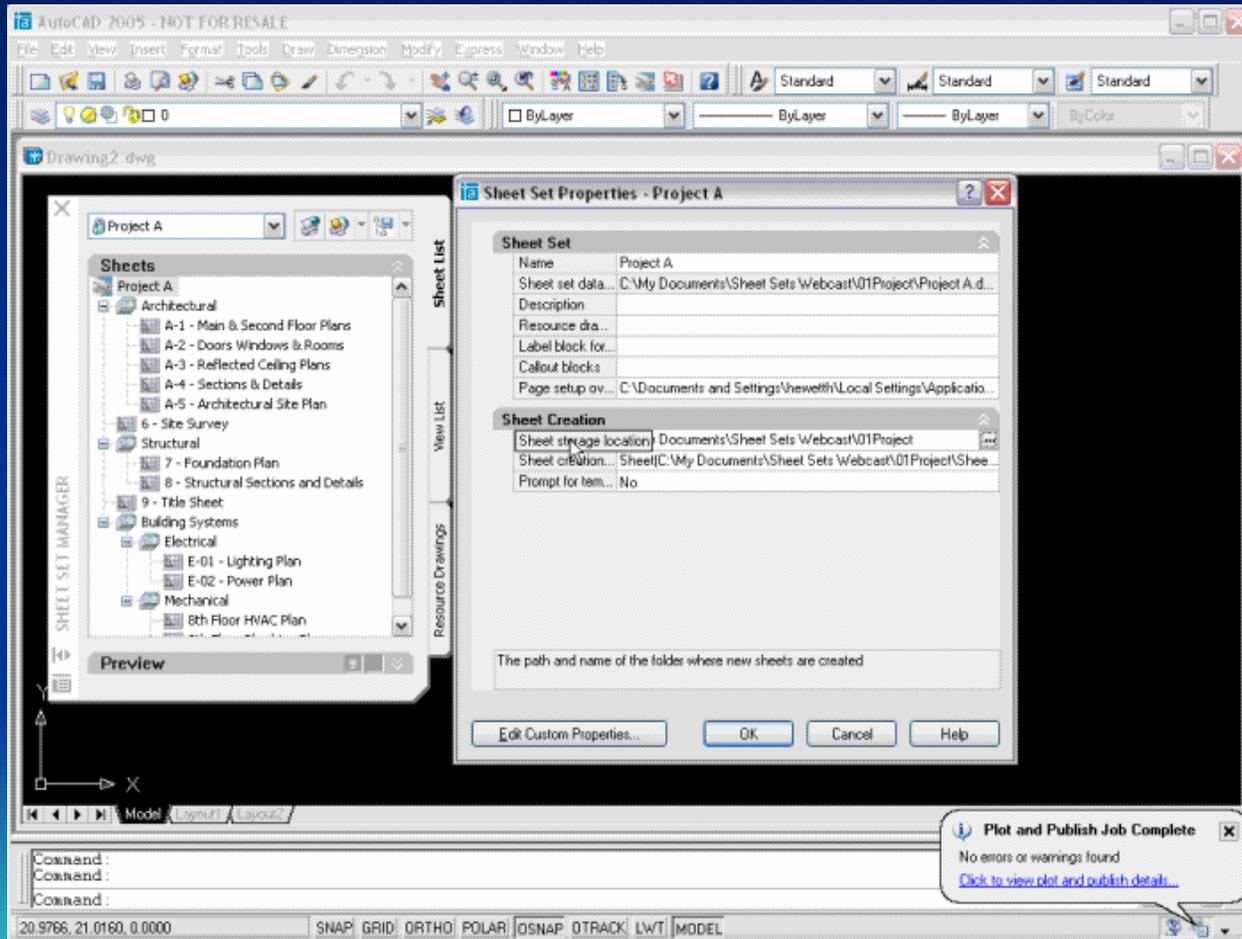
- Tool Palettes
- Tables
- Sheet Sets
- Fields



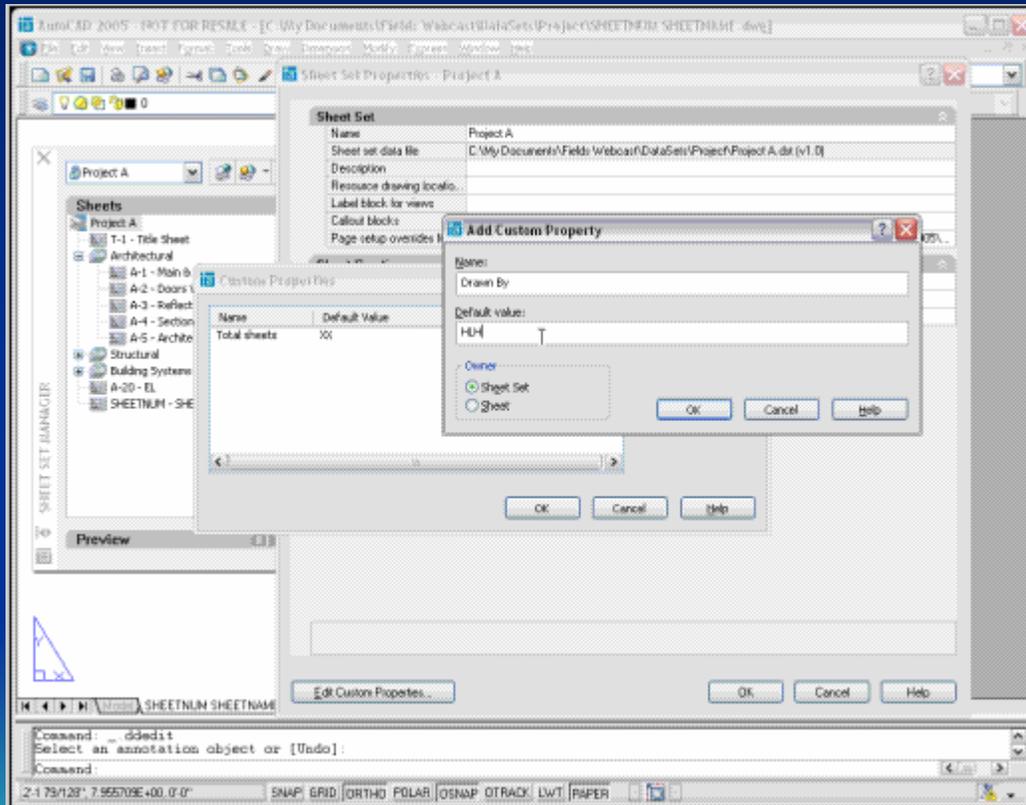
Tool Palettes



Sheet Sets



Fields



How to access AutoDesk Webcasts

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VIEW RECORDING INFO

Recording ID: ACAD9-21
Organizer: Americas Marketing
Recording Subject: Customizing Tool Palettes in AutoCAD 2005
Recording On: Tue Sep 21 11:03:38 PDT 2004
Duration: 0:40:03

Recording Format	Available	View
Microsoft Office Live Meeting Replay: Windows Media™-formatted streamed audio & video	Yes	

http://www112.placeware.com - Microsoft Office Live Meeting Replay - Microsoft Internet Explorer

autodesk®

For audio dial 1-888-942-8131 passcode: AutoCAD

AutoCAD® 2005

Customizing Tool Palettes

Heidi Hewett
AutoCAD Technical Marketing Manager
Autodesk, Inc.



Recording Information

Recording: Customizin...
Presenter:

SLIDES

- AutoCAD® 2005
- What version of AutoCAD?
- AutoCAD Tool Palettes
- Live AutoCAD
- Blog
- www.autodesk.com
- Blog
- Thank You!
- Blog
- www.autodesk.com
- Blog
- Thank You!

AutoCAD® | autodesk

Playing: 96 K bits/second | 00:12

Recorded Tuesday, September 21, 2004 11:03:38 AM PDT

Microsoft Office Live Meeting | Help

Actual Webcast

The screenshot shows a Microsoft Office Live Meeting Replay window in Microsoft Internet Explorer. The browser's address bar displays the URL: <http://www112.placeware.com> - Microsoft Office Live Meeting Replay - Microsoft Internet Explorer.

The main content area features the Autodesk logo at the top left and a poll titled "What is your primary version of AutoCAD?". The poll is currently open, as indicated by the text "Polls are open." The poll options are:

- AutoCAD 2005 (Red square)
- AutoCAD 2004 (Blue square)
- AutoCAD 2002 (Yellow square)
- AutoCAD 2000/2000i (Green square)
- AutoCAD R14 (Purple square)
- It is so old I don't remember! (Orange square)

On the left side of the window, there is a "Recording Information" section with the text "Recording: Customizin..." and "Presenter:". Below this is a "SLIDES" section with a list of slide titles: "AutoCAD® 2005", "What version of AutoCAD?", "AutoCAD Tool Palettes", "Live AutoCAD", "Blog", "www.autodesk.com", "Blog", "Thank You!", "Blog", "www.autodesk.com", "Blog", and "Thank You!".

At the bottom of the window, there is a "Buffering: 56% complete" indicator and a "Buffering:" progress bar. A "Help" button is located in the bottom right corner of the meeting interface. The Windows taskbar at the bottom shows the "Internet" icon.

What's New in Data Collection?

- Carlson Explorer - SurvCE/Jett CE Bundle
 - Represents a significant price break for touchpad data collectors with keyboards
 - This comes at a good time when H-P retires the HP-48 calculator
 - One size fits all solution taking the place of the TDS unit since it was bought by Trimble
 - Over 800 units sold since June, 2004
 - Also added a GISCE data collection product



Carlson Explorer SurvCE /Jett CE Bundle



SurvCADD 2005

What's New?



What's New in SurvCADD?

- 400 new features
 - 5 New SurvCADD Modules
 - Regrade Module
 - SurvNET Module
 - Blasting Module
 - Ore Module
 - Take-off Module



From the Geospatial Perspective

- Surveying Update
- GIS Module
- Advanced Mine Module
- Reclamation/Hydrology
- Construction Application
- GPS Equipment Guidance



Surveying Updates

- SurvNET provides a true 3-D model of Network Least Squares reduction
- Enhanced blunder detection
- Can now adjust differential level loops with network least squares program
- GPS files in the Starnet format can be input now
- Added support for the new Kentucky single state plane zone



GIS Module

- GIS Module Enhancements
 - Define Template Database has better GUI
 - Database File Utilities imports from SurvCE/GISCE and from user-defined fields
 - Created GIS Polylines by Interior Text option for closed polylines
 - Data linkage between picked polylines and ODBC database records, and linkage by common text in drawing and ODBC database records



Advanced Mine Module

- Reserve Classification has been upgraded to present much nicer looking Measured, Indicated, and Inferred reports in the Advanced Mine Module
- Can now link property boundaries to external database tables with the Advanced Mine Module
- Can now work with the output from the GIS Module to create reports incorporating complex polygon topology

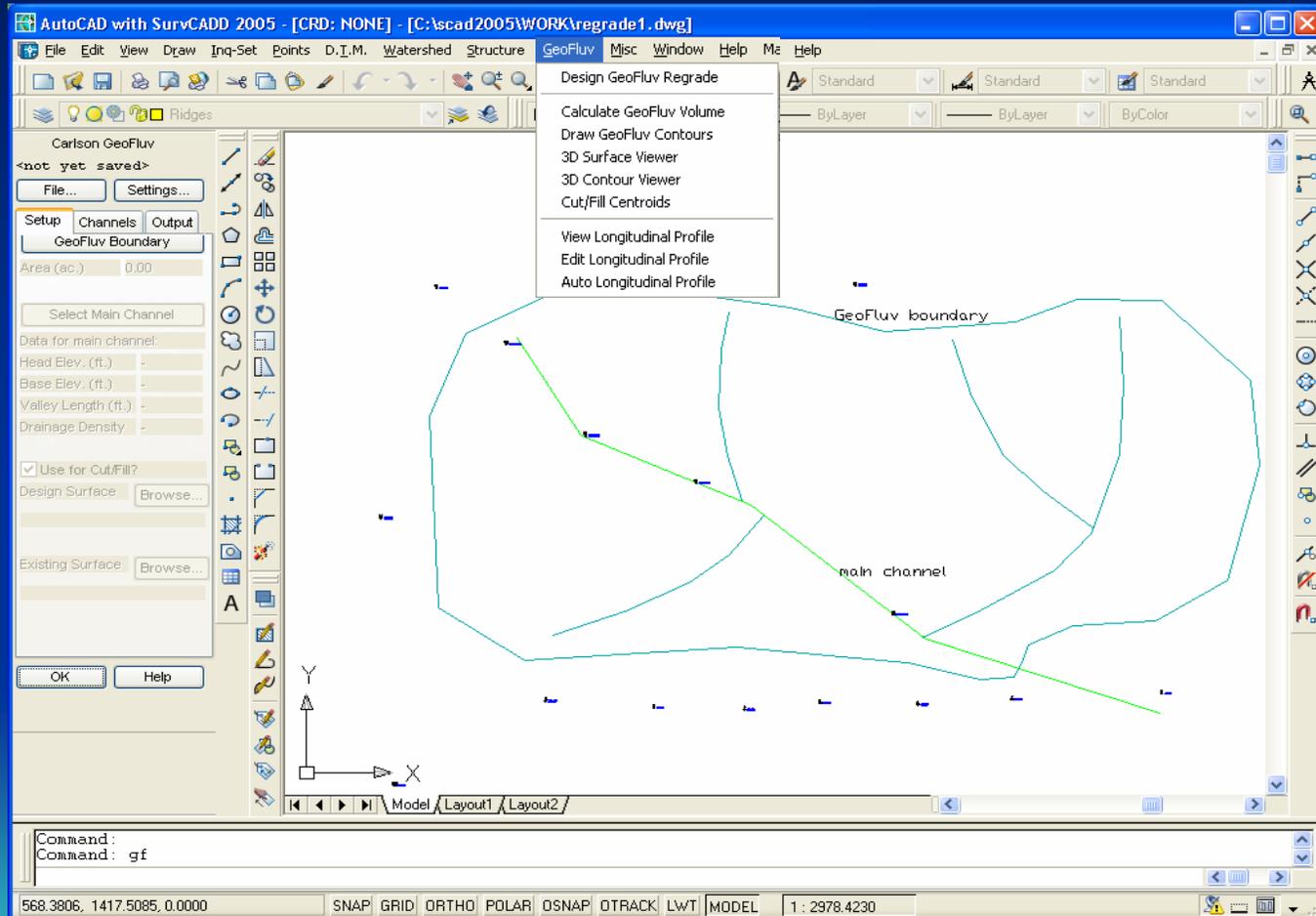


Reclamation/Hydrology

- We now have metric support for the Hydrology Module
- New module – Natural Regrade module completely redesigns watersheds for post mining land use into a stable landform using geomorphologically correct techniques and ties into GPS Equipment Guidance applications to ensure successful construction

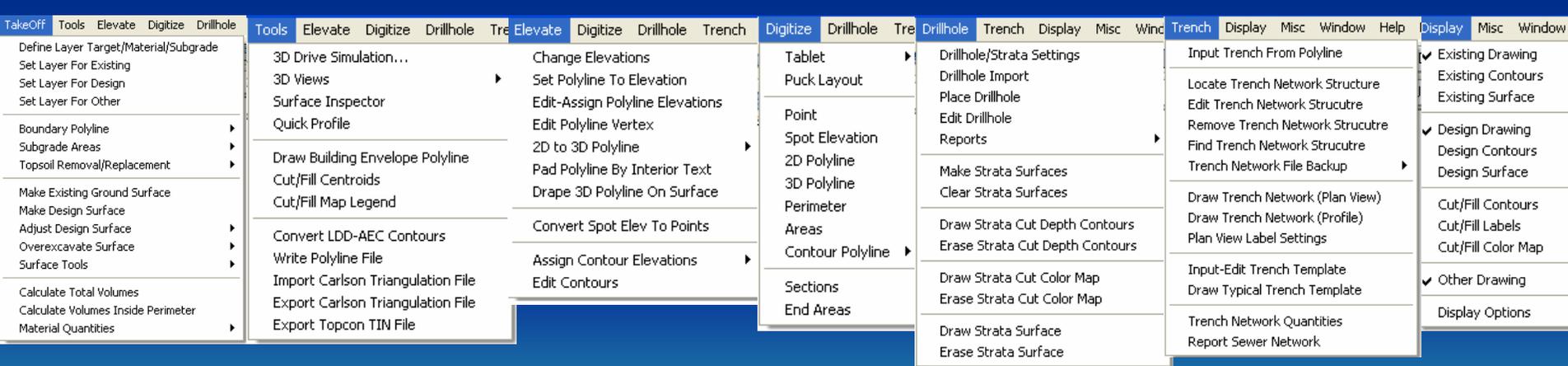


Natural Regrade



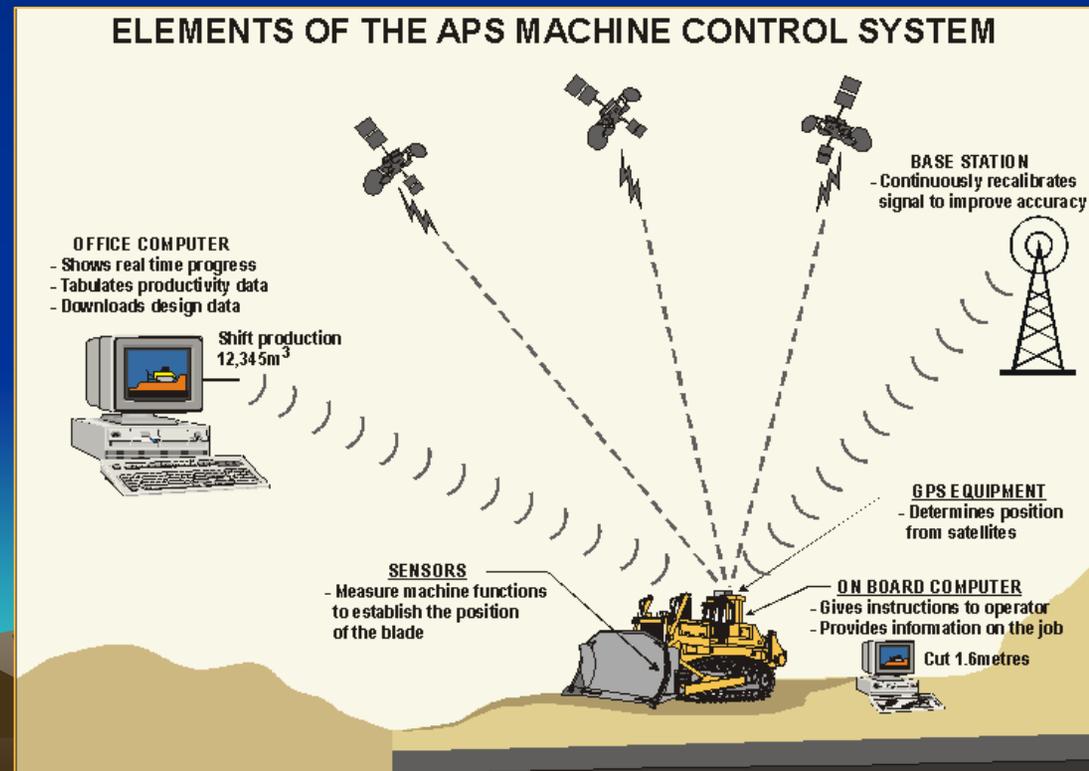
Construction Applications

- The Take-Off Module is the SurvCADD version of the stand-alone Take-OFF (Construction Take-off tool for estimating earthwork volumes)



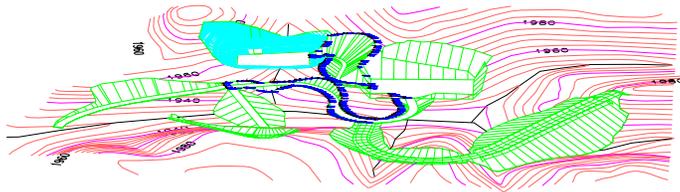
GPS Equipment Guidance

- New products –
 - AutoGrade
 - Carlson Grade (Dozers/Drills/Excavators)
 - Truck Pro
 - Productivity Tools



Elements of GPS Machine Guidance

8 (or more) Elements to Machine Automation



1. Preparing the DTM, Centerline, Edge Lines and Plan View



2. Radio System for GPS and for Linking Data



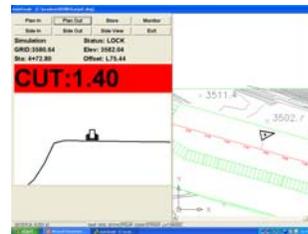
3. Cables, Mountings, Peripherals Such as Light Bars

4. GPS or Robotic Total Sta.

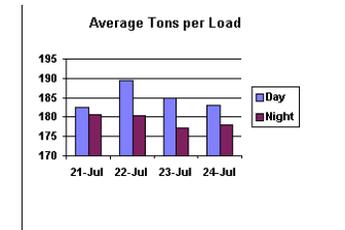
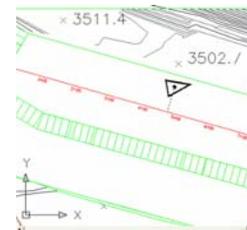
5. Computer & File Formats



6. Field Software Interface and Data Processing



7. Real-Time Monitoring



8. Productivity Analysis

AutoGrade - [C:\Program Files\AutoGrade 2000\data\fb2_push.dwg]

AutoGrade Setup Help

Plan In Plan Out Monitor

Side In Side Out Side View Exit

Set Activity Activity:3001

Set Elev

Set Blade Pitch: 2.5% Roll: 2.0%

VRMS:0.023

Status: LOCK

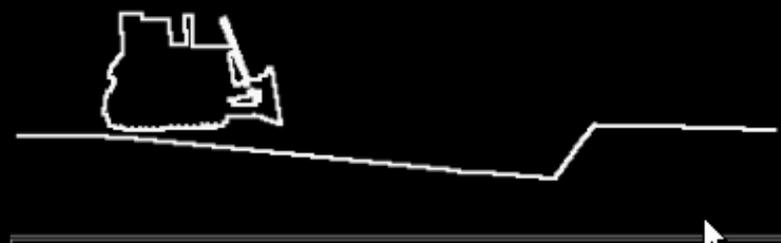
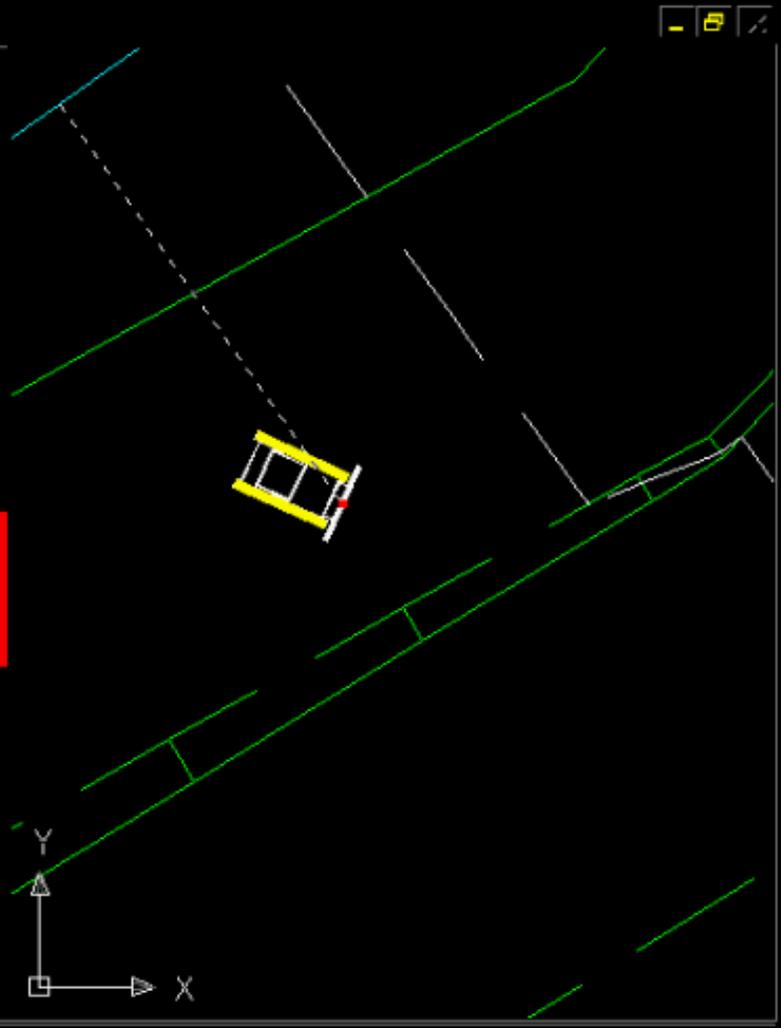
TIN:-12.00

Elev: -10.36

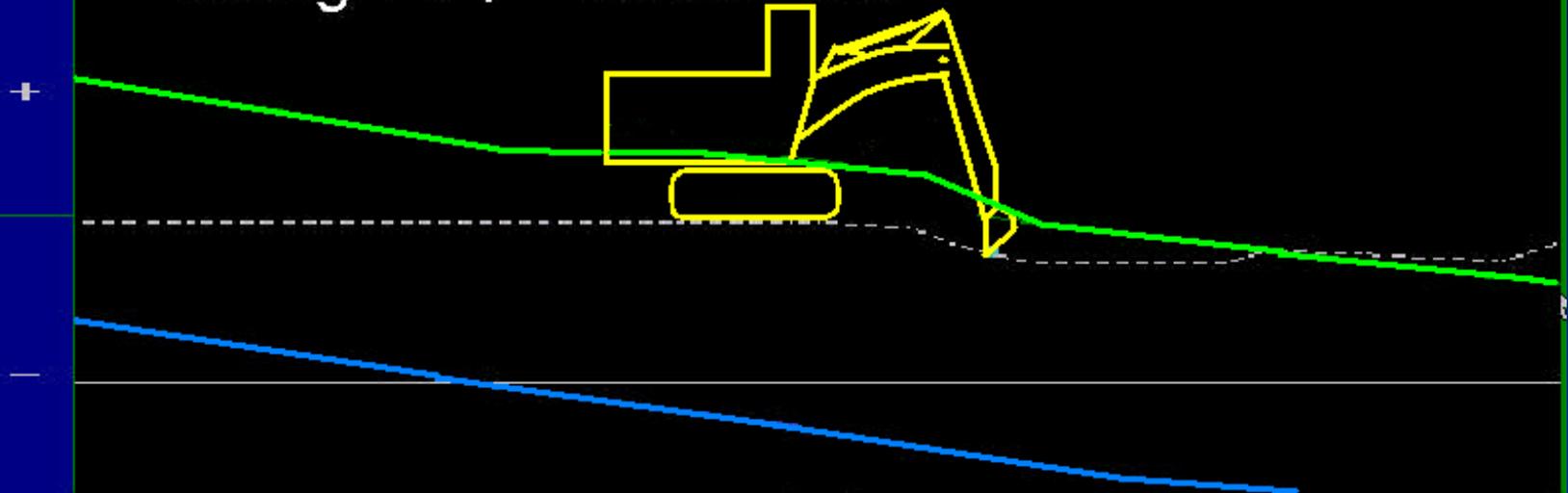
CH: 24.30

Offset: R45.58

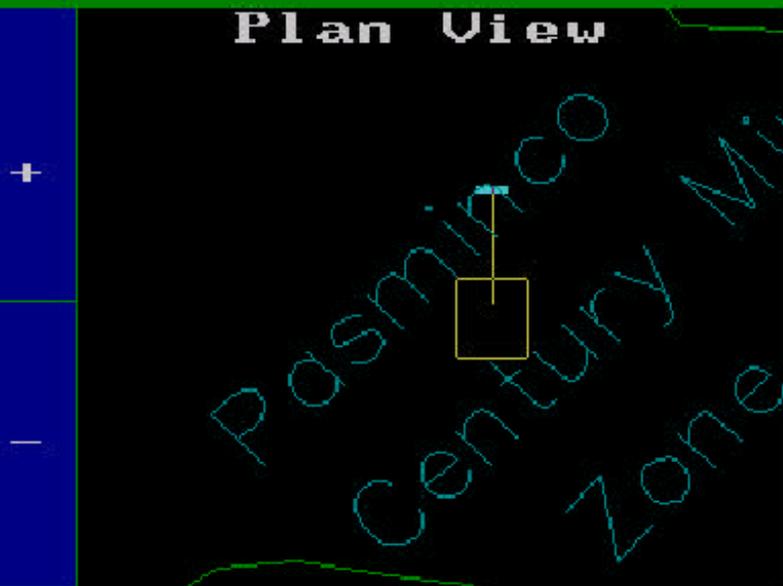
CUT:1.69



Marginal, Code 20



Plan View



FILL: 1.04

CUT: 4.13

Z:1050.13

STATUS: LOCK

VIEW

MONITOR

EXIT

AutoGrade - [Obramp3.dwg]

AutoGrade Setup Help



View

Set

Tools

Exit

V Offset: 0.400



V

Reverse

Operator: test

Activity:

Pitch: 7.3%

Roll: 0.0%

SIMULATION

Status: LOCK

TIN:28.82

Elv:28.93

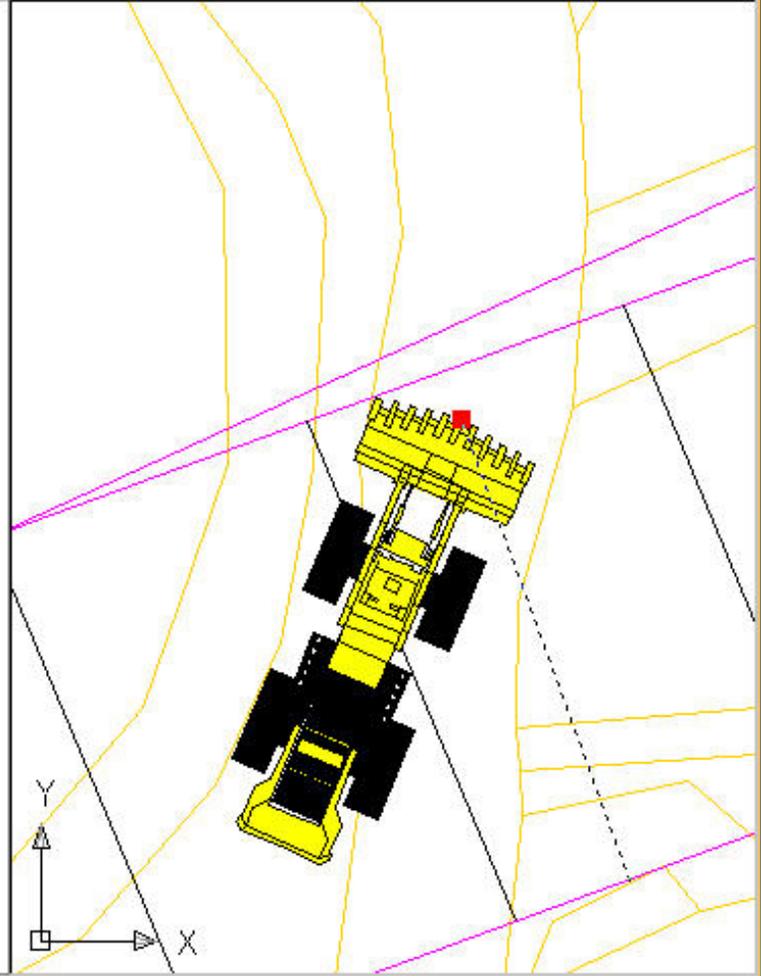
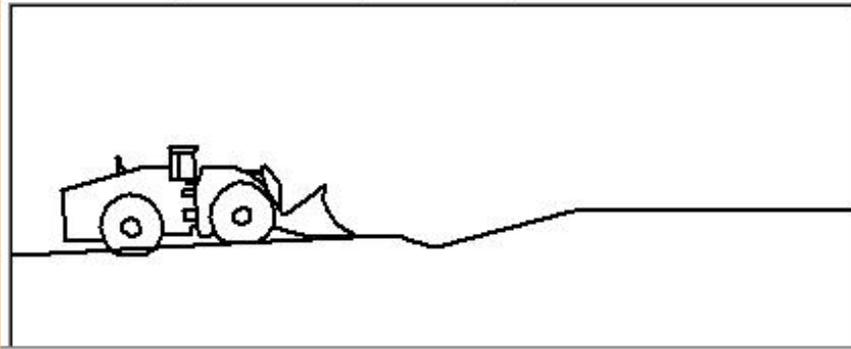
CH: 189.75 R18.20

CUT:0.11 *

Elevation

Operator

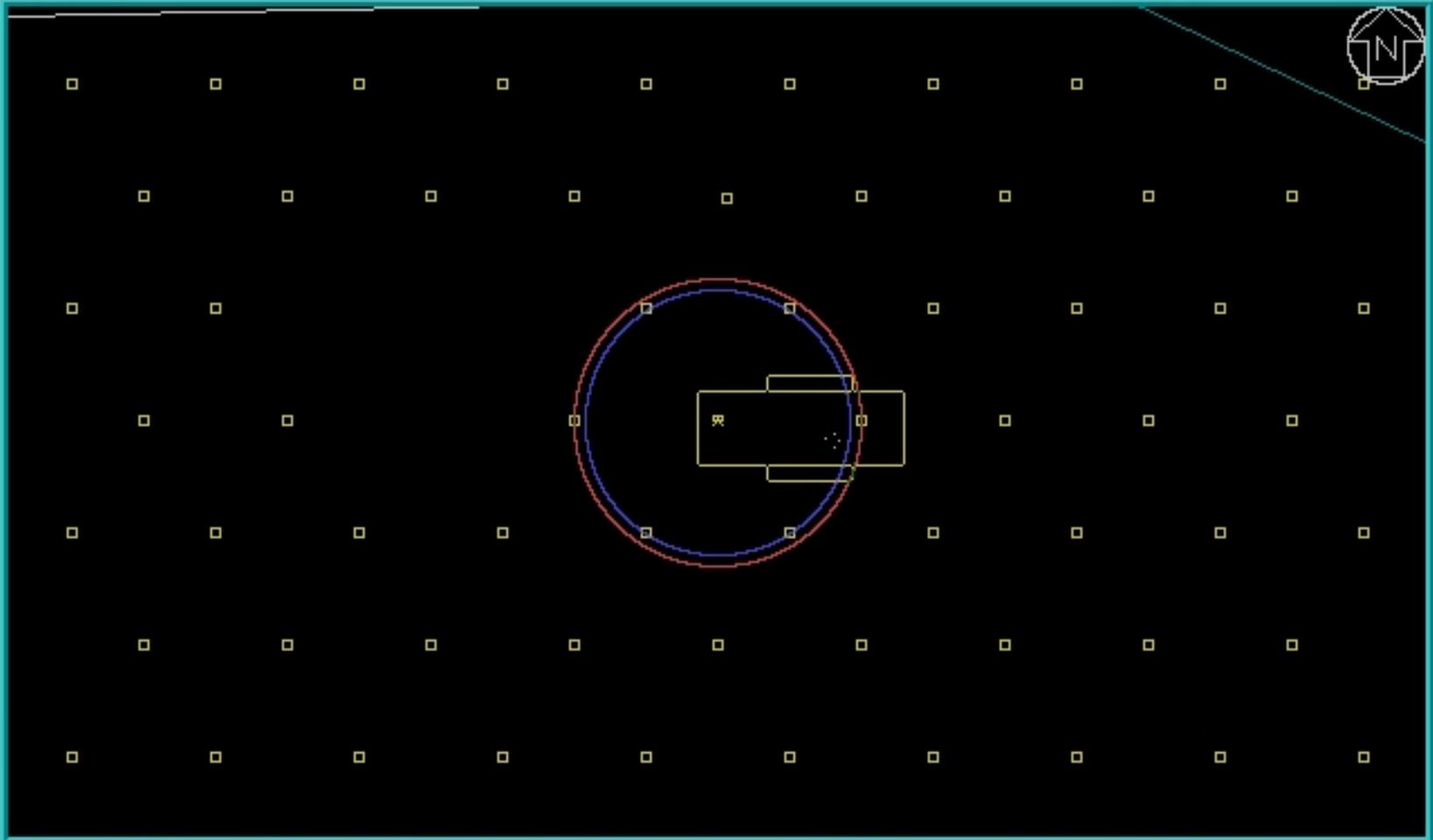
Blade



ELV: 50.0

LOCK-SIM
CUT: 56.6

BLAST1



DRILL

MONITOR

EXIT



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