

**DIGITAL  
VISION**

# **MACHINERY & DIGITAL SURFACING**

Developments in Equipment and Vendor Interfacing, Lens Data, Tracer/Edger Sync, Digital Surface and Inspection Station

Brian Biggs, Aaron Hagen, Danny Reyes

# MACHINERY

New development in lab equipment  
interfacing

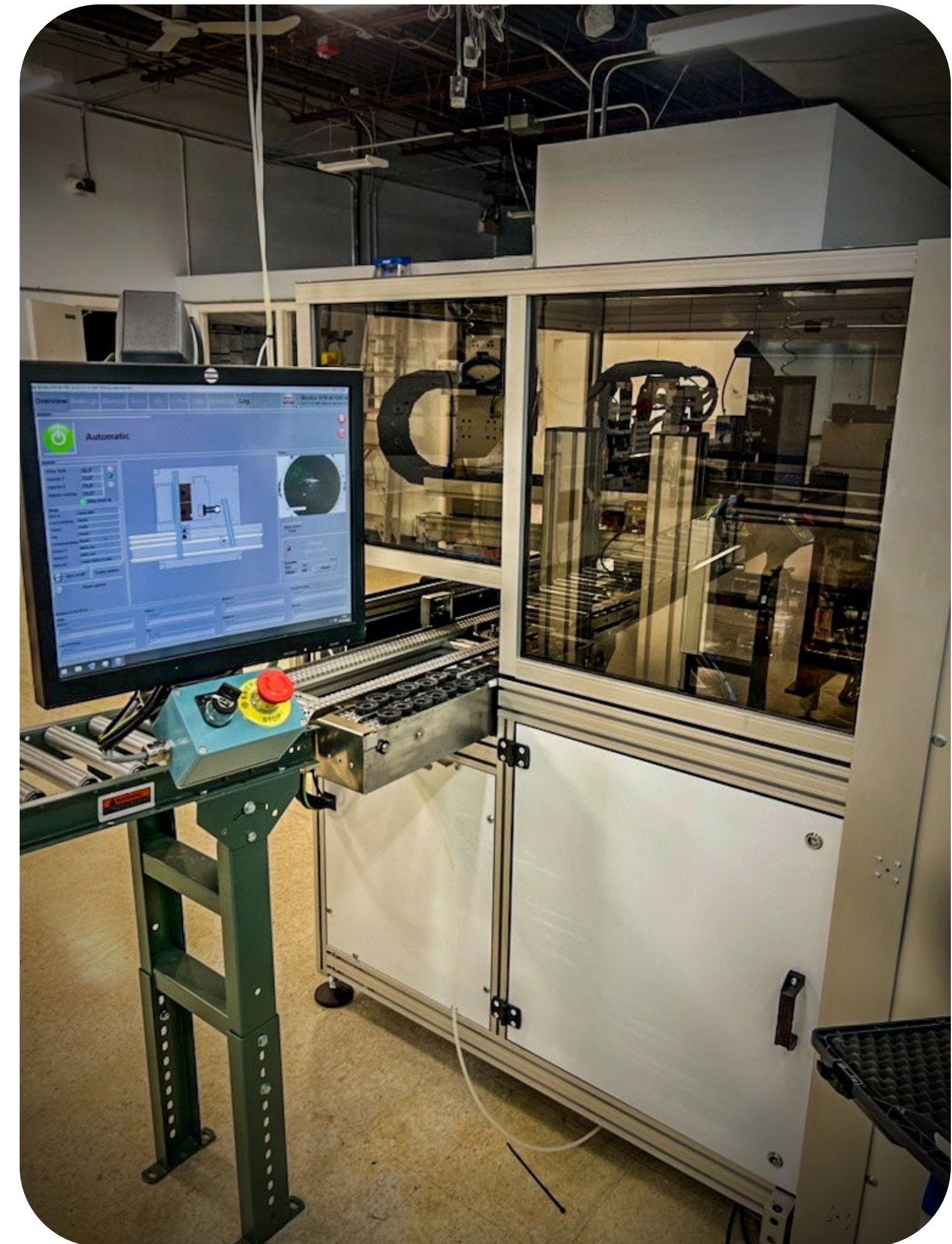
- ◆ Satisloh ART Blocker:
  - ART glue thickness at block diameter for de-blocker
  - ART manual blocker support on front-side progressives
- ◆ Expanded support for Essilor CLBS interface to DVI—tracking, checkoffs, etc.
- ◆ New Interface for Essilor DECIDE inspection device and process



# MACHINERY

New development in lab equipment  
interfacing

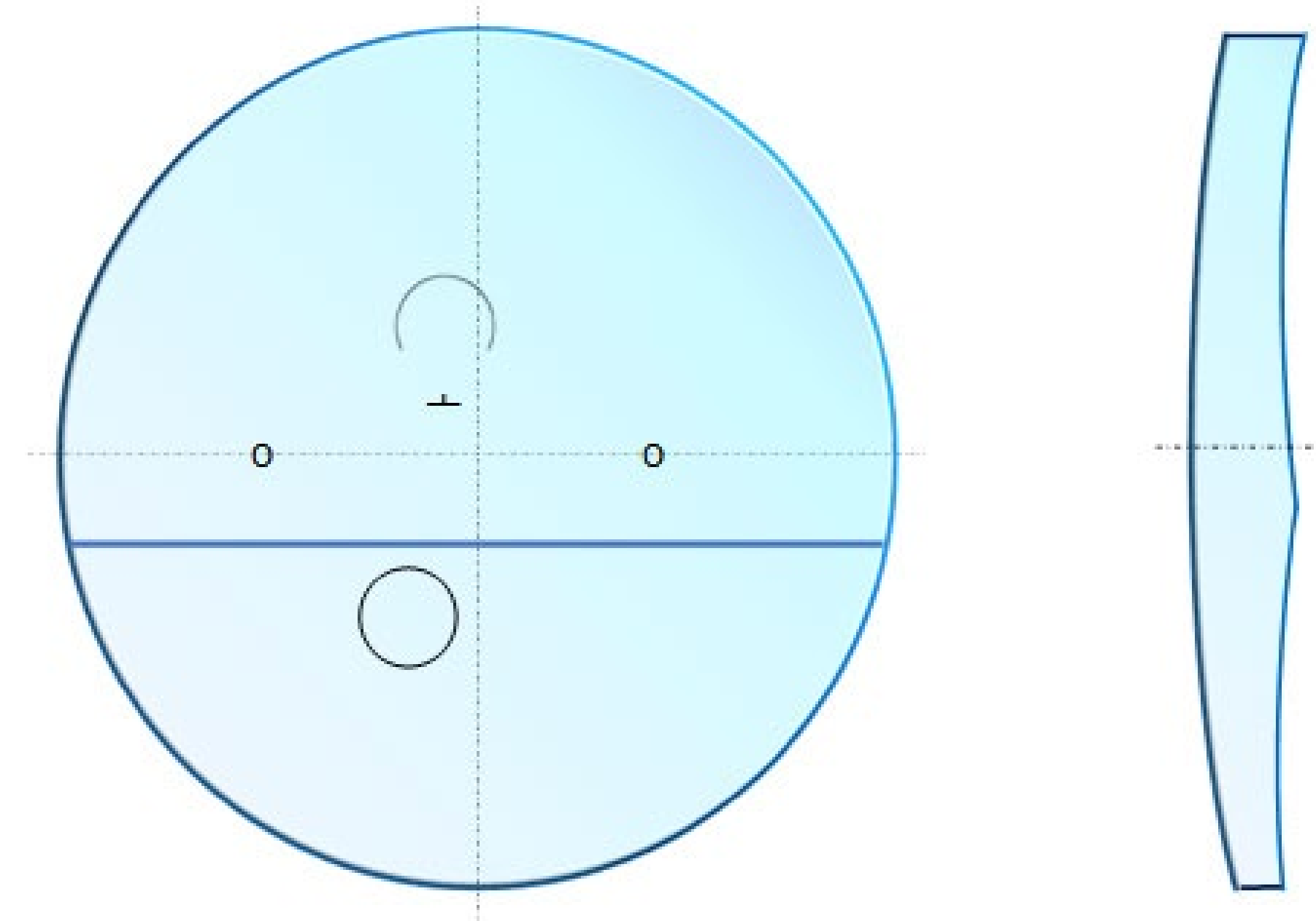
- ◆ Support Optotech Complex Cribbing
- ◆ MEI CORE generator support
  - Generates, polishes, and engraves without a block



# MACHINERY

## Slab Offs

- ◆ One-call / Two-pass Slab off support (Satisloh and Schneider)
  - Schneider requires VCA 3.15 or newer on generator (verify initialization)
  - Satisloh requires dual surface add-on
  - Older equipment may not be eligible
- ◆ Slab Offs on IOT designs
  - Also available with new process supported above
  - Work with DVI to coordinate IOT license update



# MACHINERY

## Lens Inventory Storage Systems

- ◆ Schneider AWS integration and support (both lenses and frames)
- ◆ Continued support of RAX inventory system
- ◆ Kardex improvements



# MACHINERY

## Serial Port Interface

- ◆ Enhancements for serial port communication
  - Began with support for new Digi hardware during parts shortages
  - Communications are now buffered, making them faster
- ◆ TCP/IP preferred, but all barcode scanning and most frame tracers still require serial



# MACHINERY

## Serial Port Interface

- ◆ Network-based serial port modules can be tough to troubleshoot when things go awry
  - Strongly recommended to configure via MAC address (as opposed to DHCP IP)
  - Label your Serial hubs (corresponding DVI workstation number, MAC address, nickname, etc.)
- ◆ Use DVI Workstation Configuration to record MAC address <5,5>

The screenshot shows the 'Workstation Configuration' window with the following fields and values:

- Remote: 4
- Comments: Machinery Interface #2
- Computer name: DVI-MACHINE2
- IP Address: 192.168.20.22
- MAC Address: 90:8D:6E:90:13:8A
- Startup Keys: (empty)
- Last Activity: 4/29/2024

A table with two columns, 'Drivers' and 'Options', is highlighted with a red box. The first row contains the text 'NOTES' and 'AB:CD:12:34:WX:YZ'.

| Drivers | Options           |
|---------|-------------------|
| NOTES   | AB:CD:12:34:WX:YZ |
|         |                   |
|         |                   |
|         |                   |
|         |                   |
|         |                   |

On the right side, there is a table with two columns: 'Operator' and 'Time'.

| Operator | Time            |
|----------|-----------------|
| MI       | 4/29/2024 14:12 |
| MI       | 4/29/2024 14:12 |
| MI       | 4/29/2024 14:12 |
| MI       | 4/29/2024 14:12 |
| MI       | 4/29/2024 14:12 |
| MI       | 4/29/2024 14:12 |

# MACHINERY

How to handle new machines and processes

- ◆ For new machines, ask the vendor if they have worked with DVI to create a working interface...before you purchase
- ◆ After that conversation, talk with DVI about the machine and the process.
- ◆ Let us know when the installation is occurring.
  - Consider necessary Job Filters
  - DVI machinery port setup is in place before the machine installation
- ◆ The same can be said of a new Digital Integration



# DIGITAL INTEGRATIONS



## Bridging the lab orders to 3<sup>rd</sup> party digital calculations

- ◆ Developing an integration
- ◆ How we choose who to work with
- ◆ Ongoing support of the product
- ◆ Options for getting started with a new vendor
  - Outsourcing product—quick and easy to set up
- ◆ Considering installing surfacing for first time?
  - Set up outsource brand with your house brand name

72,7.033470,7.332770,0.000334,0.430133,0.002237,3.304373,3.103137,4.737304,4.423040,4.53;7.828422;7.344482;6.876840;6.425490;5.990427;5.571645;5.169135;4.782890;4.412888;4.22;7.835773;7.350550;6.881651;6.429073;5.992815;5.572871;5.169239;4.781913;4.410858;4.35;7.857957;7.371373;6.901134;6.447239;6.009689;5.588482;5.183619;4.795099;4.422952;4.42;7.895265;7.407247;6.935588;6.480289;6.041353;5.618780;5.212573;4.822734;4.449187;4.77;7.947204;7.457699;6.984564;6.527802;6.087415;5.663408;5.255783;4.864547;4.489626;4.30;8.013852;7.522801;7.048132;6.589850;6.147960;5.722470;5.313387;4.920713;4.544423;4.50;8.095041;7.602424;7.126206;6.666396;6.223000;5.796031;5.385500;4.991419;4.613811;4.39;8.190959;7.696791;7.219044;6.757727;6.312849;5.884423;5.472463;5.076988;4.698088;4.35;8.301973;7.806279;7.327024;6.864218;6.417875;5.988008;5.574633;5.177773;4.797594;4.335;8.428393;7.931199;7.450463;6.986197;6.538416;6.107138;5.692382;5.294174;4.912724;4.583;8.570551;8.071885;7.589697;7.124005;6.674825;6.242180;5.826100;5.426622;5.043924;4.326;8.728741;8.228639;7.745039;7.277962;6.827439;6.393507;5.976202;5.575562;5.191676;4.237;8.903225;8.401737;7.916800;7.448444;6.996701;6.561605;6.143189;5.741480;5.356509;4.3688;9.094365;8.591616;8.105471;7.635964;7.183125;6.746975;6.327542;5.924853;5.538933;3159;9.302649;8.798773;8.311551;7.841003;7.387155;6.950033;6.529660;6.126057;5.739251;50122;9.528547;9.023631;8.535402;8.063887;7.609102;7.171068;6.749810;6.345352;5.957710;34909;9.772328;9.266450;8.777285;8.304854;7.849184;7.410298;6.988210;6.582940;6.194518;57746;10.034227;9.527428;9.037377;8.564098;8.107601;7.667906;7.245052;6.839069;6.4499738797;10.314391;9.806749;9.315874;8.841785;8.384528;7.944143;7.520655;7.114093;6.7244238246;10.613019;10.104563;9.612927;9.138160;8.680290;8.239357;7.815375;7.408283;7.018056231;10.930237;10.421107;9.928869;9.453563;8.995237;8.553855;8.129360;7.721711;7.330832969;11.266380;10.756711;10.264023;9.788322;9.329550;8.887669;8.462643;8.054398;7.66248794;11.621741;11.111700;10.618625;10.142470;9.683216;9.240814;8.815189;8.406285;8.0123997;11.996603;11.486153;10.992624;10.516001;10.056216;9.613207;9.186927;8.777298;8.318735;12.390910;11.880015;11.386017;10.908841;10.448445;10.004777;9.577768;9.167455;8.32899;12.804640;12.293255;11.798681;11.320893;10.859824;10.415428;9.987768;9.576882;9.56490;13.237707;12.725730;12.230541;11.752059;11.290271;10.845255;10.417044;10.005712;19364;13.689982;13.177380;12.681475;12.202290;11.739909;11.294360;10.865726;10.454017;31429;14.161401;13.648064;13.151480;12.671724;12.208823;11.762869;11.333869;10.921770;32595;14.651822;14.137835;13.640694;13.160429;12.697139;12.250825;11.821438;11.408991;32745;15.161350;14.646814;14.149173;13.668532;13.204885;12.758184;12.328456;11.915536;22020;15.690080;15.175053;14.677046;14.196047;13.732010;13.284975;12.854788;12.441236;70488;16.238064;15.722678;15.224311;14.742918;14.278550;13.831069;13.400258;12.985989;38203;16.805427;16.289676;15.790909;15.309187;14.844385;14.396286;13.964777;13.549659;25291;17.392143;16.875986;16.376889;15.894743;15.429329;14.980546;14.548211;14.132192;31710;17.998148;17.481658;16.982148;16.499395;16.033307;15.583724;15.150490;14.733572;

# DIGITAL INTEGRATIONS

## New and Updated

- ◆ Tokai
  - Heavy use of lens selection database (BCCH)
  - New 1.76 material
- ◆ Unity
  - Calculation process update
  - Unity Via II and some legacy styles
- ◆ Optotech—Optocalc 4.0 platform
- ◆ Signet Armorlite integration with Essilor DS platform
- ◆ Launch of Varilux XR line
  - Support for new fitting values



# NEW LENS PROJECTS

## Transitions Gen S

### A generation update is a large scale project!

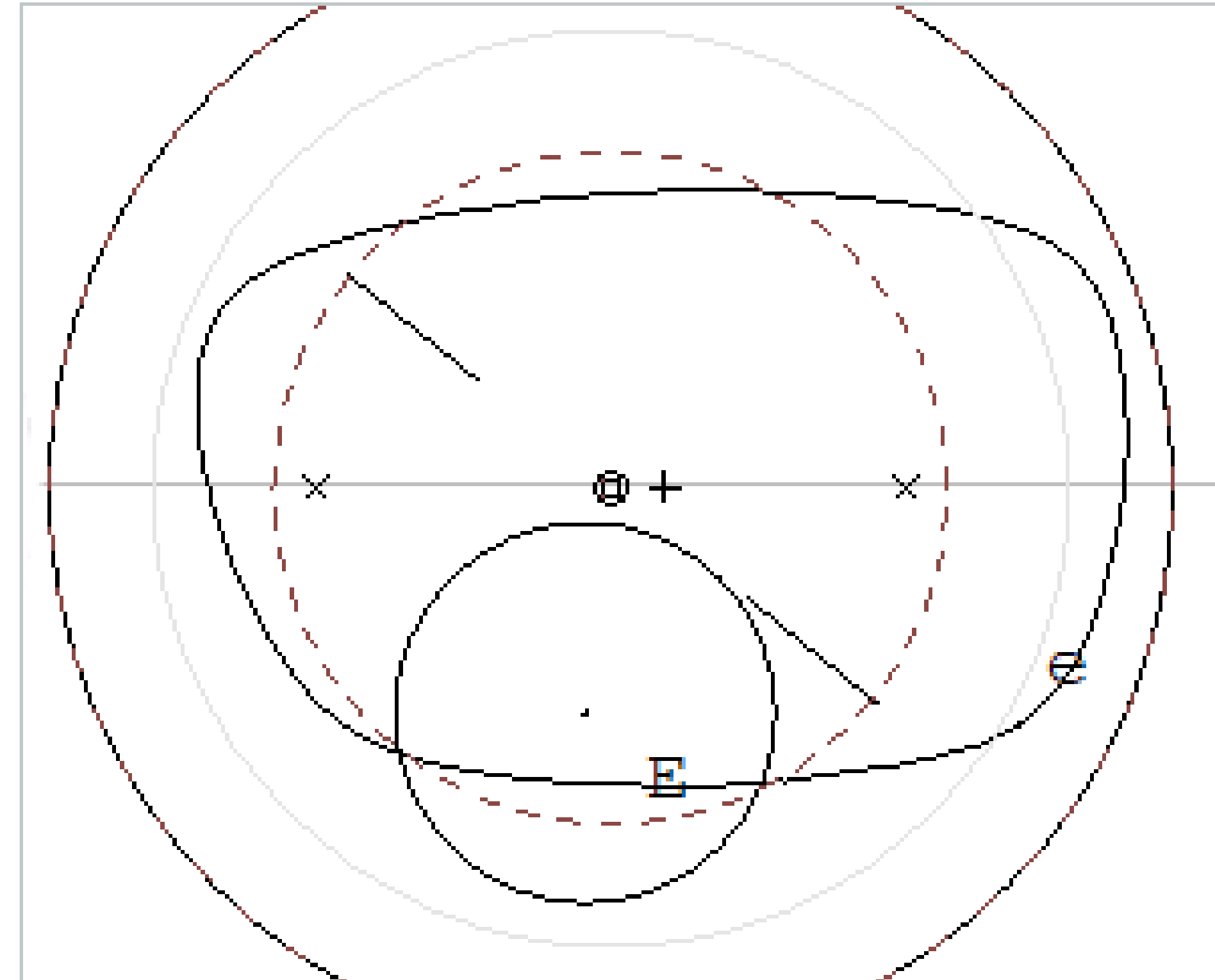
- ◆ DVI begins work on translations months in advance
  - Lens data from multiple vendors
  - SFSV, pucks, finished lenses
  - Translation tables (Digital calc, Visionweb, etc.)
- ◆ Why do we choose to use old color codes (as opposed to new color codes)?
  - Ordering preferences, and ease of existing setup “downstream”
  - Easy to map color codes, depending on preference!
- ◆ Why new special indicators?
  - Significant change in true curve
  - Allows for new product to exist alongside old product temporarily

Transitions®  
Gen S™

# NEW LENS PROJECTS

## Spot Segs on any SF lens

- ◆ Previously limited to multifocals
- ◆ Useful for niche product such as Lenticular bowl lenses
  - Fills in for when round seg not available or lengthy back orders
  - Placement and size customizable
  - Not available on 3<sup>rd</sup> party digital design
- ◆ Contact DVI for documentation and assistance



# MEASUREMENT TOOLS

Tools and Gauges to help tackle processing problems

- ◆ Document available from DVI for recommended QC gauges and measurement tools
- ◆ Surface line gauges:
  - 50mm and 20mm sag gauge, 3 point “in-line” gauge
  - Prism gauge
  - Thickness gauge for on-block lenses (SVAL/TVAl test)
  - ARC Lamp (surface quality)



# MEASUREMENT TOOLS

Tools and Gauges to help tackle processing problems

- ◆ Finish gauges and devices:
  - DVI calibration frame
  - Digi-sizer for circumference check
- ◆ Contact DVI for sources



*Digi-Sizer II*

# TRACER/EDGER SYNC PROCESS

## Overview

- ◆ This process ensures that sizing and the sizing values on the work ticket are correct and in sync with all Tracers and Edgers.
- ◆ It's not a new idea. But it has been refined with the use of tools available in DVI.
- ◆ A solid frame with a known circumference is used. DVI has had a frame made specifically for this process.
- ◆ First time fit is improved, and sizing issues in general are reduced.
- ◆ The process helps ID machines that are in need maintenance or replacement.



dv Vision/Trace/Machine Interface

File Machinery Wizard TRACE

| Rmt | Port | Dev    | Type       | R | Comment   | MachWiz | Station       | FCirc+ | PCirc+ | DBL+ |
|-----|------|--------|------------|---|-----------|---------|---------------|--------|--------|------|
|     |      |        | TRACER     |   |           |         |               |        |        |      |
| 101 | 1    | TRACER | OMA TRACER |   | TRACER 1  |         | 019 TRACER 1  | 0.00   | 0.00   | 0.50 |
| 101 | 2    | TRACER | OMA TRACER |   | TRACER 2  |         | 020 TRACER 2  | 0.48   | 0.00   | 0.50 |
| 101 | 3    | TRACER | OMA TRACER |   | TRACER 3  |         | 021 TRACER 3  | 0.45   | 0.00   | 0.50 |
| 101 | 4    | TRACER | OMA TRACER |   | TRACER 4  |         | 022 TRACER 4  | 0.28   | 0.00   | 0.50 |
| 101 | 5    | TRACER | OMA TRACER |   | TRACER 5  |         | 023 TRACER 5  | 0.38   | 0.00   | 0.50 |
| 101 | 6    | TRACER | OMA TRACER |   | TRACER 6  |         | 024 TRACER 6  | -0.39  | -0.20  | 0.50 |
| 101 | 7    | TRACER | OMA TRACER |   | TRACER 7  |         | 025 TRACER 7  | 0.50   | 0.70   | 0.50 |
| 101 | 8    | TRACER | OMA TRACER |   | TRACER 8  |         | 061 TRACER 8  | 0.35   | 0.06   | 0.50 |
| 101 | 9    | TRACER | OMA TRACER |   | TRACER 9  |         | 068 TRACER 9  | 0.00   | 0.00   | 0.50 |
| 101 | 13   | TRACER | OMA TRACER |   | TRACER 10 |         | 069 TRACER 10 | 0.10   | 0.00   | 0.00 |



# TRACER/EDGER SYNC PROCESS



## Case Study

- ◆ We have been helping labs install this process and they have seen some significant reductions with sizing issues.
- ◆ We typically start with the Custom Breakage Report to see if we can identify specific machines that are contributing higher than average breakage with smalls.
- ◆ It is important to note that Breakage must be recorded **accurately** to understand the magnitude of the situation. Using the TRACE ID when recording Breakage, which we covered yesterday in the TRACE Presentation, helps ensure accurate machine recording.
- ◆ Some labs end up refining their breakage setup and recording to ensure that they can monitor and track improvements correctly.



# TRACER/EDGER SYNC PROCESS



Case Study – Lab before process installation

- ◆ Heavy presence in the Top 20 Breakage By Cost/Count Report in (3,7 – Breakage Reports)
- ◆ Total Finish Breakage of 6.4%
- ◆ DPJ at 3.4
- ◆ 1131 Small in a Month
- ◆ Average of 54 small lenses per day

| RX DEI  | DEPT             | POSITION    | REASON       | # LENS |
|---------|------------------|-------------|--------------|--------|
| POLY    | TINT, ASSY, INSP | ASSEMBLY    | SCRATCH      | 817    |
| PLASTIC | TINT, ASSY, INSP | ASSEMBLY    | SCRATCH      | 347    |
| PLASTIC | TINT, ASSY, INSP | ASSEMBLY    | CHIP         | 249    |
| POLY    | MRIII            | 1PM -5PM    | PITTS        | 197    |
| POLY    | COAT             | QUANTUM     | PITS         | 181    |
| PLASTIC | TRACE            | TRACER 7    | SMALL        | 175    |
| POLY    | TRACE            | TRACER 4    | SMALL        | 174    |
| POLY    | TRACE            | TRACER 7    | SMALL        | 170    |
| PLASTIC | TRACE            | TRACER 4    | SMALL        | 168    |
| POLY    | POLISHING        | 9AM -1PM    | SWIRLS       | 153    |
| POLY    | TRACE            | TRACER 3    | SMALL        | 153    |
| POLY    | AR ROOM          | KEVIN (K3 ) | VOID /FP     | 152    |
| POLY    | POLISHING        | 1PM -5PM    | SWIRLS       | 143    |
| HIRES   | TINT, ASSY, INSP | ASSEMBLY    | SCRATCH      | 124    |
| POLY    | DIP ROOM         | QUANTUM     | PITS         | 121    |
| POLY    | AR ROOM          | KEVIN (K3 ) | WRONG RECIPE | 108    |
| POLY    | MRIII            | 9AM -1PM    | PITTS        | 108    |
| PLASTIC | TRACE            | TRACER 3    | SMALL        | 102    |
| POLY    | TRACE            | TRACER 5    | SMALL        | 95     |
| PLASTIC | TRACE            | TRACER 1    | SMALL        | 94     |

# TRACER/EDGER SYNC PROCESS



Case Study – Lab a couple of months after process installation

- ◆ Total Finish Breakage of 1.4% (-5%)
- ◆ DPJ at 1.4 (-2 days)
- ◆ 279 Small in a Month (-852 lenses)
- ◆ Average of 13 small lenses per day (-41 lenses)
- ◆ Significantly reduced presence in the Top 20 Breakage By Count Report in 37
- ◆ Note that lab is also tracking “Big” as well via Rework Department.

| RX DEPT | DEPT            | POSITION       | REASON      | # LENSES |
|---------|-----------------|----------------|-------------|----------|
| POLY    | TINT, ASSY INSP | ASSEMBLY       | SCRATCH     | 450      |
| PLASTIC | TINT, ASSY INSP | ASSEMBLY       | SCRATCH     | 211      |
| POLY    | SURFACE         |                | BLOCK PRISM | 129      |
| PLASTIC | AUTO EDGER      |                | SMALL       | 125      |
| POLY    | AUTO EDGER      |                | SMALL       | 106      |
| PLASTIC | TINT, ASSY INSP | ASSEMBLY       | CHIP        | 95       |
| POLY    | POLISHING       |                | SWIRLS      | 90       |
| POLY    | SURF REWORK     |                | MR3 PITS    | 85       |
| PLASTIC | SURFACE         |                | BLOCK PRISM | 82       |
| POLY    | POLISHING       |                | UNPOLISH    | 68       |
| HIRES   | TINT, ASSY INSP | ASSEMBLY       | SCRATCH     | 66       |
| POLY    | SURF REWORK     |                | NO REASON   | 55       |
| HIRES   | AUTO EDGER      |                | SMALL       | 48       |
| POLY    | SURFACE         |                | DEBLOCKED   | 37       |
| POLY    | AR ROOM         | ANDREAS ( A3 ) | VOID /FP    | 37       |
| POLY    | AR ROOM         | JARED (3J )    | VOID /FP    | 36       |
| POLY    | AUTO EDGER      |                | BIG         | 35       |
| POLY    | POLISHING       |                | WAVES       | 34       |
| POLY    | AUTO EDGER      |                | CROOKED SEG | 33       |
| HIRES   | SURFACE         |                | BLOCK PRISM | 27       |

# MACHINE ANALYSIS



The tool to identify issues – <3,8,7>

◆ Report going back a couple of months on a breakage reason like “Small” in the Finish Breakage Department

- If Small is reported in another Breakage Department add that Department as well

imized Breakage Report Writer

Copy Report F3: Save Report F5: Save and Run Report F6: Delete Report F8: Print Report View Report Analyze Run Cycle Mode

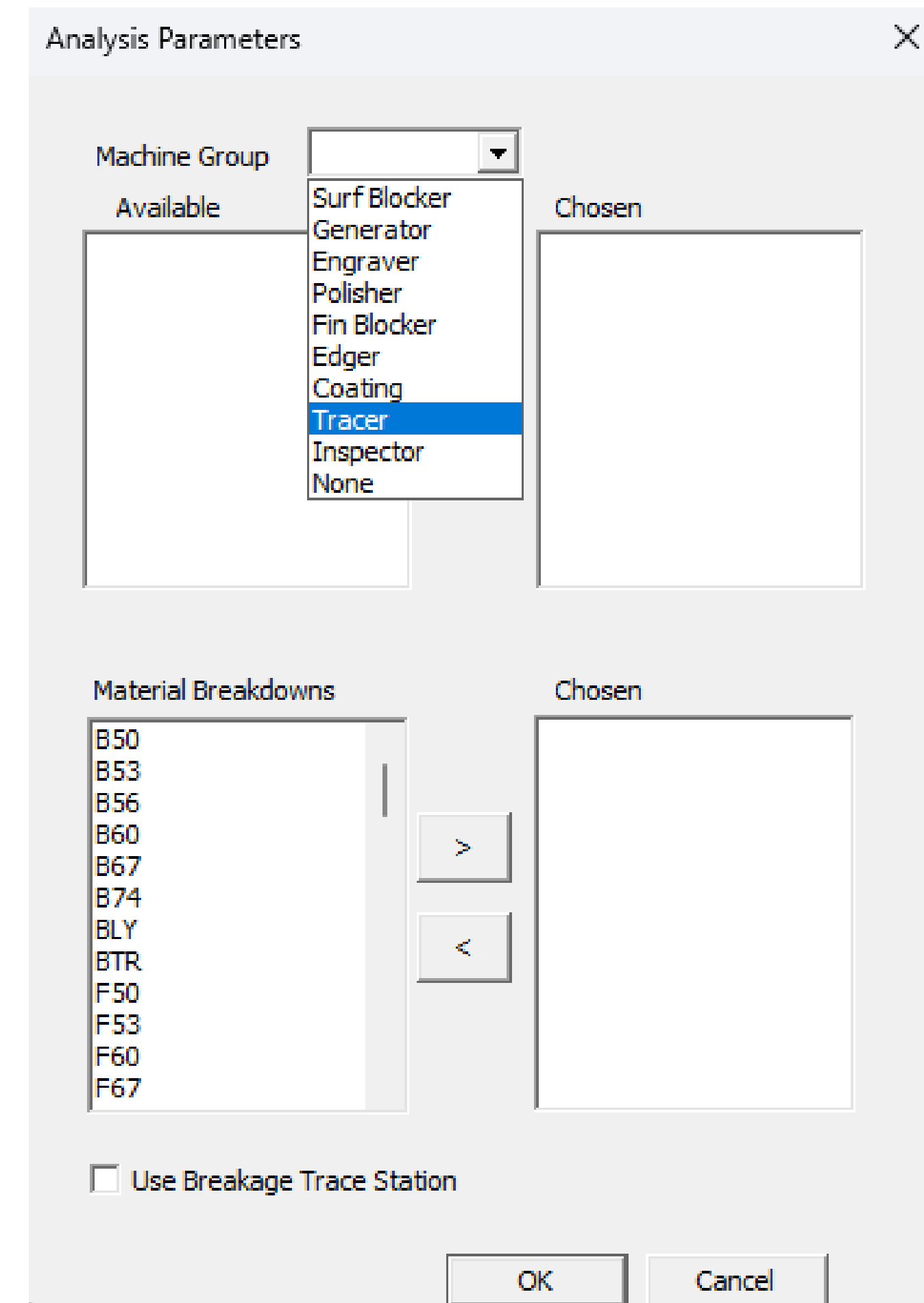
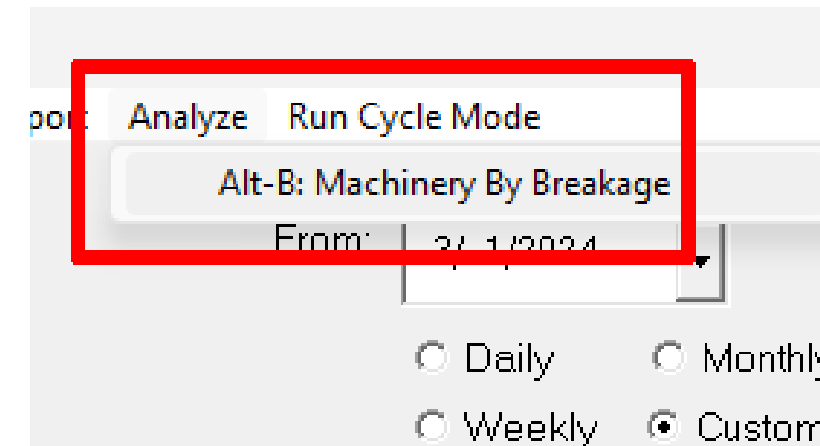
Select Report:  From:   Daily  Monthly  Weekly  Custom

|              | Include | Value  |
|--------------|---------|--------|
| Breakage Dpt | ▼       | FINISH |
| Reason       | ▼       | SMALL  |
|              | ▼       |        |
|              | ▼       |        |
|              | ▼       |        |
|              | ▼       |        |
|              | ▼       |        |

# MACHINE ANALYSIS

The tool to identify issues – <3,8,7>

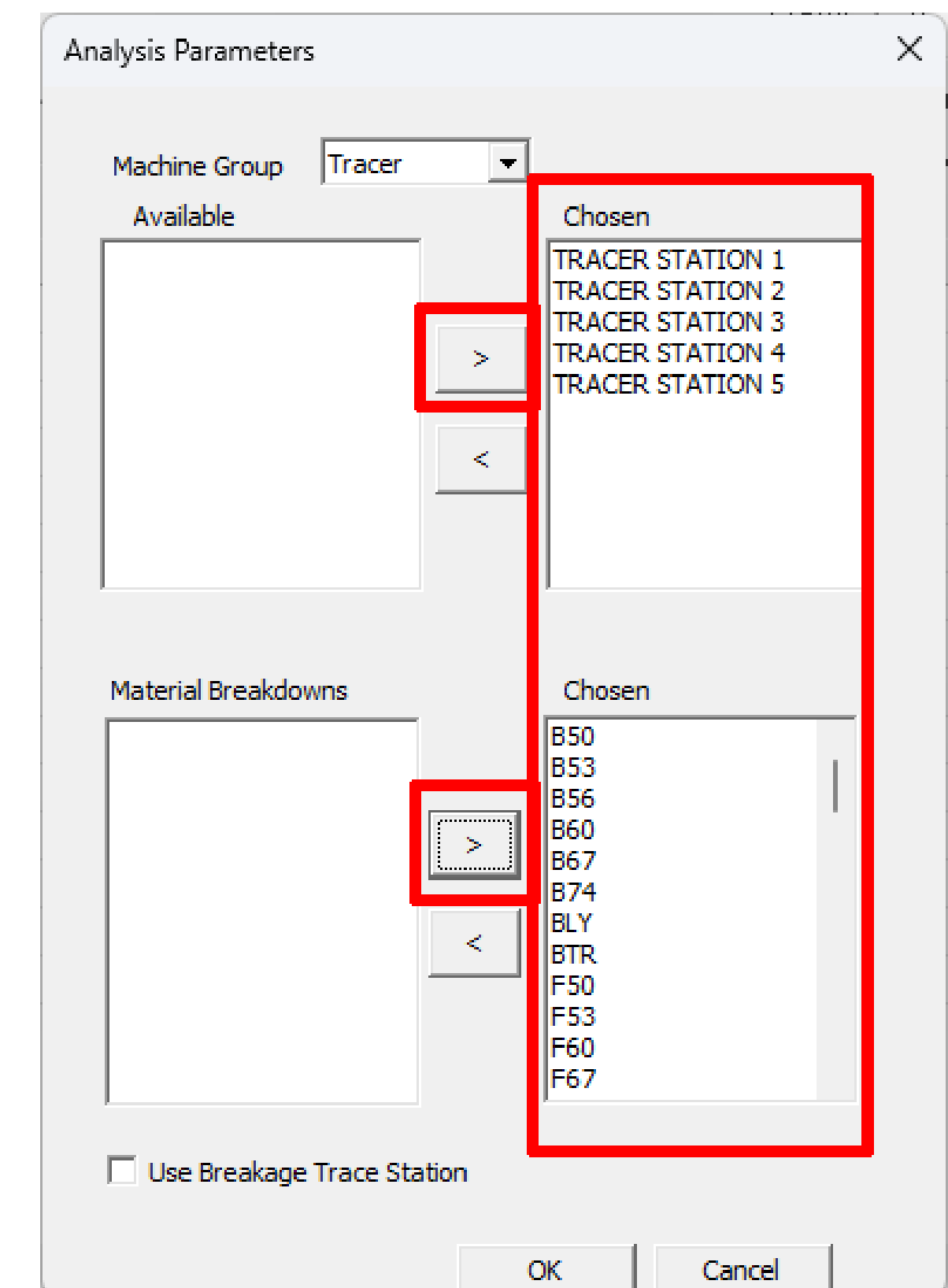
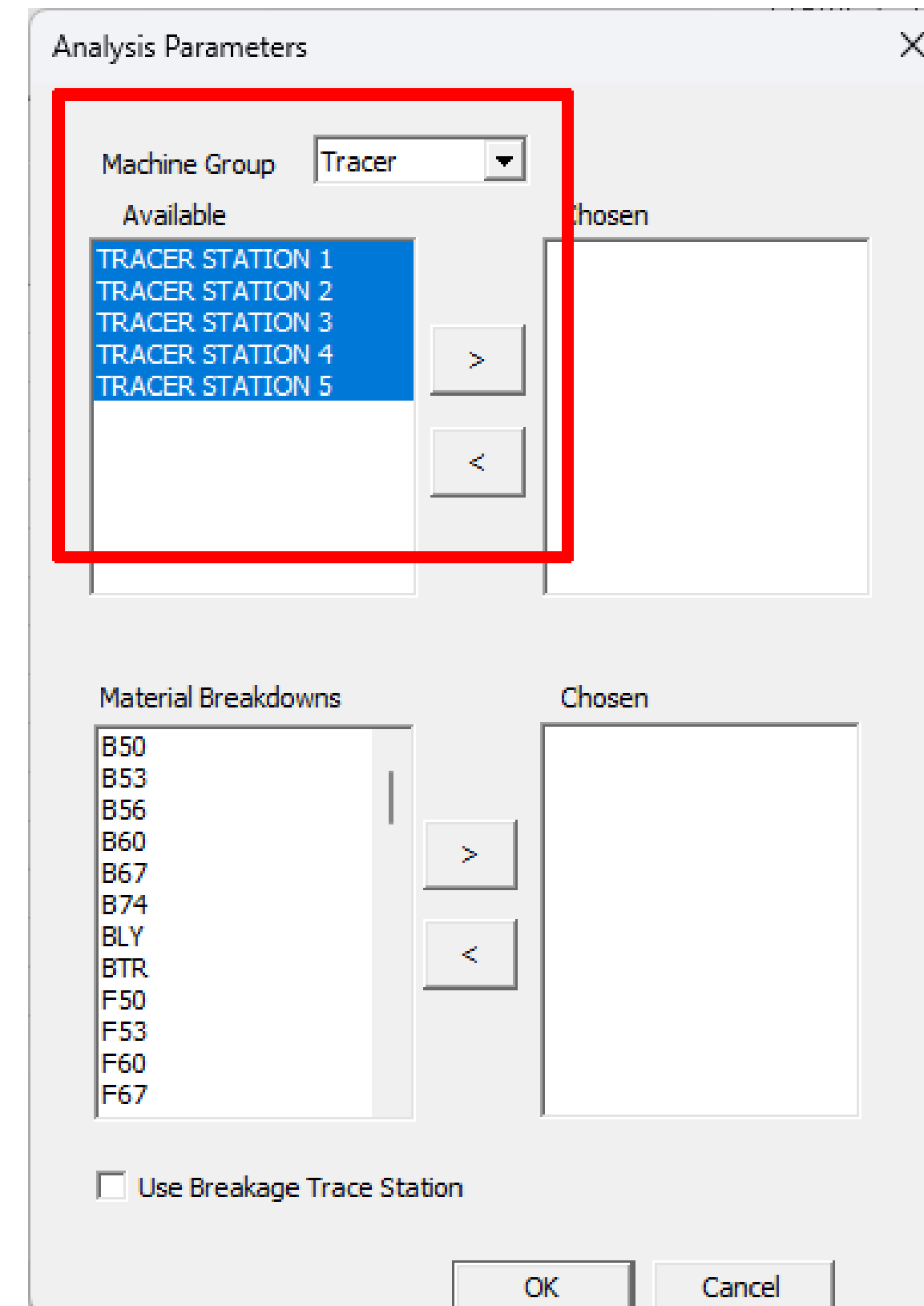
- ◆ Machine Analysis is a tool within the Custom Breakage Report Writer
- ◆ Once the report is complete, run a Machine Analysis by group and investigate breakage/production rate by machine group.
  - Tracers
  - Edgers



# MACHINE ANALYSIS

The tool to identify issues - <3,8,7>

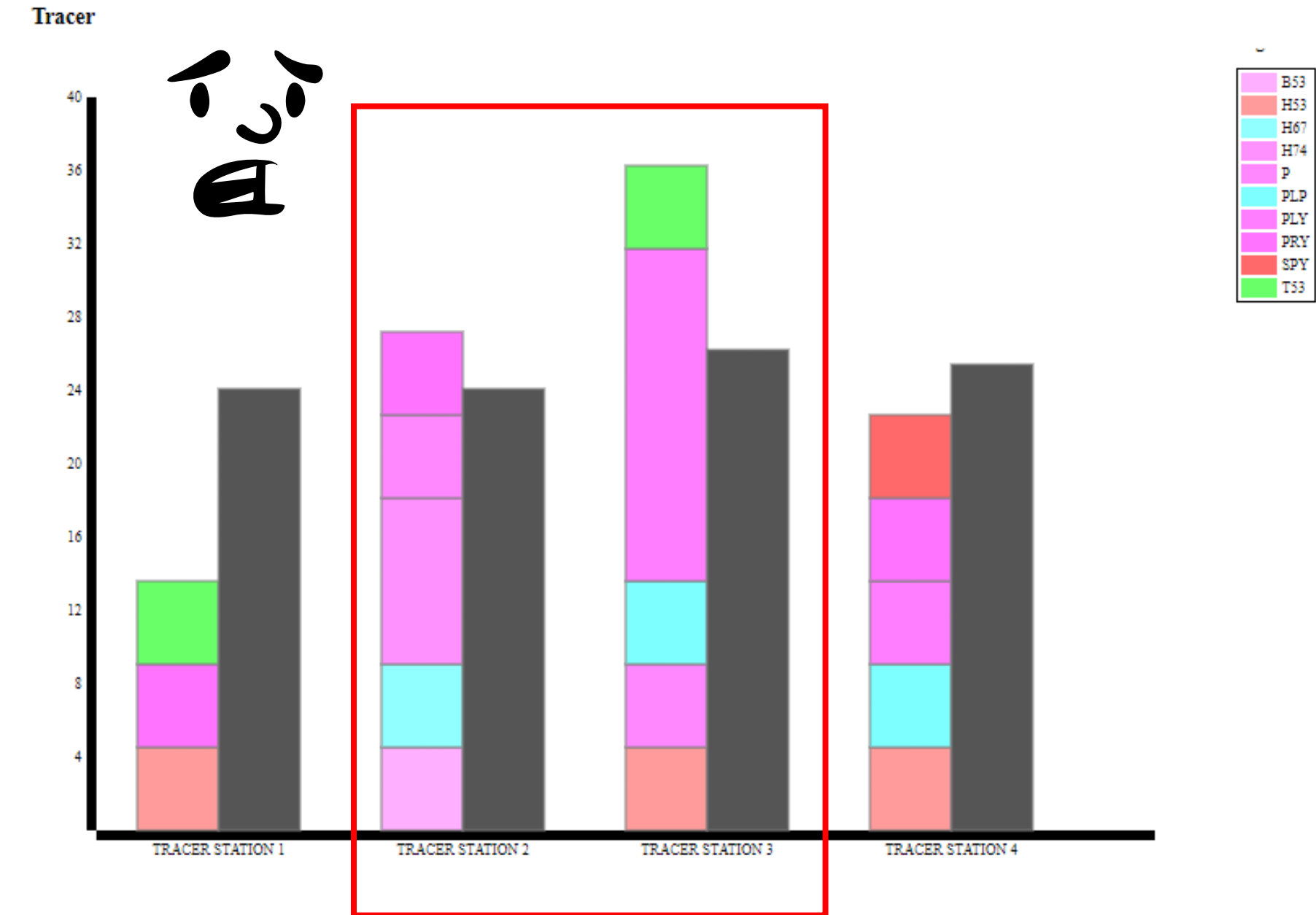
- ◆ Select all Tracers and all Materials and then move them to the “Chosen” field in the Analysis Parameters.
- ◆ “Use Breakage TRACE Station” can be selected if you are selecting TRACE Stations when posting breakage.
- ◆ Hit OK to start the machine analysis.



# MACHINE ANALYSIS

The tool to identify issues - <3,8,7>

- ◆ The Machine Analysis will show
  - Breakage Rate on the left
  - Production Rate on the right
- ◆ And will ID machines that have large breakage/production ratios
- ◆ This example is with Tracers
- ◆ Look for anomalies
- ◆ We ID these in Red under “Breakage by Machine”



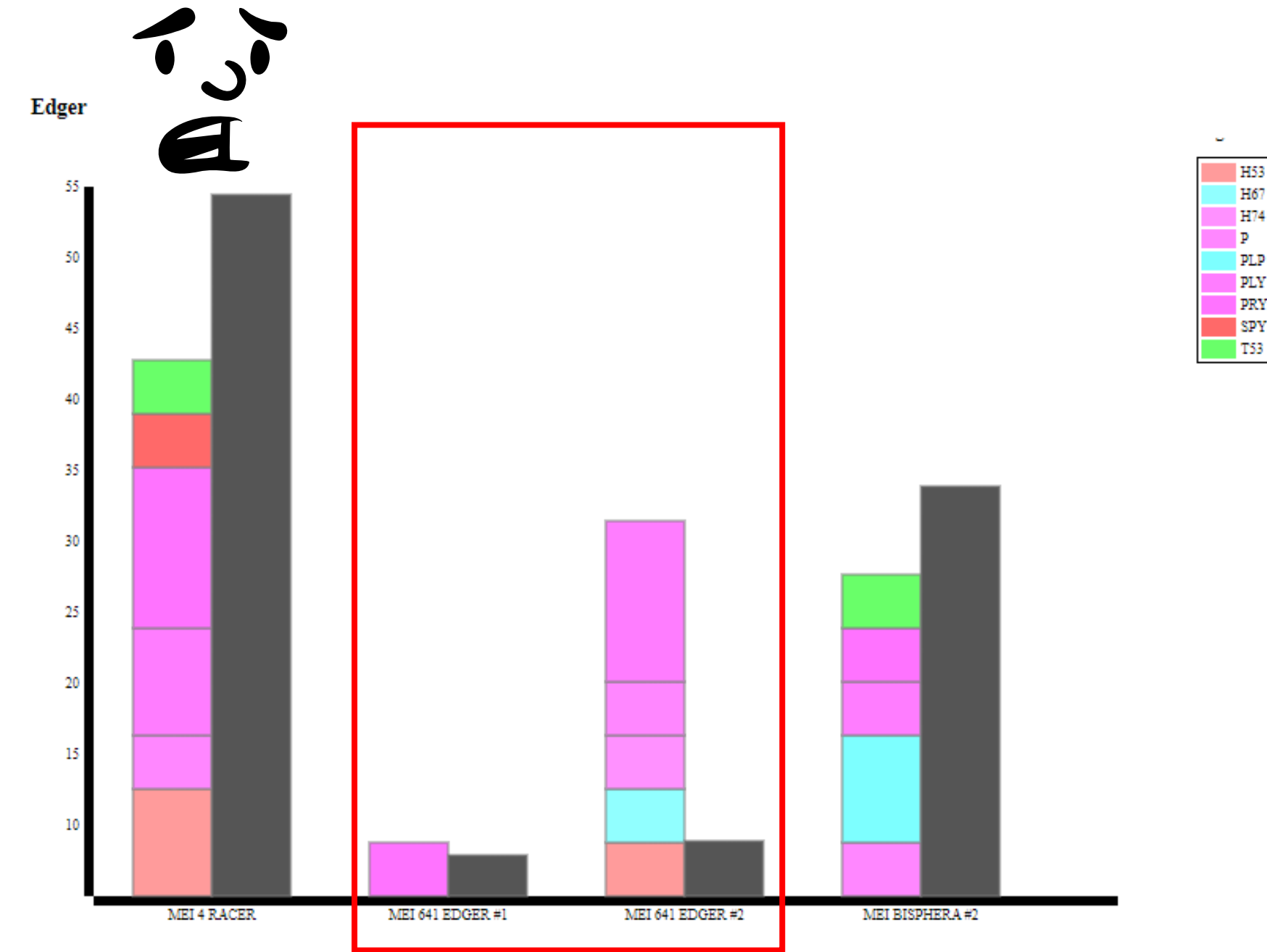
Breakdown by Machine

| Stations/Materials | B53   | H53   | H67   | H74   | P     | PLP   | PLY    | PRY   | SPY   | T53   | Total Breakage pctg | Trace Production pctg |
|--------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|---------------------|-----------------------|
| TRACER STATION 1   |       | 4.55% |       |       |       |       |        | 4.55% |       | 4.55% | 13.64%              | 24.16%                |
| TRACER STATION 2   | 4.55% |       | 4.55% | 9.09% | 4.55% |       |        | 4.55% |       |       | 27.27%              | 24.14%                |
| TRACER STATION 3   |       | 4.55% |       |       | 4.55% | 4.55% | 18.18% |       |       | 4.55% | 36.36%              | 26.25%                |
| TRACER STATION 4   |       | 4.55% |       |       |       | 4.55% | 4.55%  | 4.55% | 4.55% |       | 22.73%              | 25.44%                |

# MACHINE ANALYSIS

The tool to identify issues - <3,8,7>

- ◆ Same report analyzing Edgers.
- ◆ Note that sometimes you will see a machine with high breakage and a low production output. This can be a machine that handles “problem jobs”.
- ◆ Nevertheless, more reason to investigate the process.



Breakdown by Machine

| Stations/Materials | H53   | H67   | H74   | P     | PLP   | PLY    | PRY    | SPY   | T53   | Total Breakage pctg | Trace Production pctg |
|--------------------|-------|-------|-------|-------|-------|--------|--------|-------|-------|---------------------|-----------------------|
| MEI 4 RACER        | 8.33% |       |       | 4.17% |       | 8.33%  | 12.50% | 4.17% | 4.17% | 41.67%              | 54.43%                |
| MEI 641 EDGER #1   |       |       |       |       |       |        | 4.17%  |       |       | 4.17%               | 3.23%                 |
| MEI 641 EDGER #2   | 4.17% | 4.17% | 4.17% | 4.17% |       | 12.50% |        |       |       | 29.17%              | 4.37%                 |
| MEI BISPHERA #2    |       |       |       | 4.17% | 8.33% | 4.17%  | 4.17%  |       | 4.17% | 25.00%              | 31.89%                |

# TRACER/EDGER SYNC PROCESS

## Case Study – Discoveries from different labs

- ◆ Tracers taken offline due to mechanical issues.
- ◆ Incident with a Tracer that was not settling into bevel correctly.
- ◆ Varying size adjustments across all Tracers and Edgers.
- ◆ Labs not keeping tabs on stylus cycles we can lead to excessive wear. Some machines, like the LT1200, can be setup to display the cycle count on the Tracer Job Screen.
- ◆ The common thought is that running the calibration jig on the Tracer, and calibrating the edgers, is all you need to do to get good sizing...it's not.



# TRACER/EDGER SYNC PROCESS

## Case Study – Discoveries from different labs

- ◆ The Station Analyzer <TRACE-3,6,6> is useful to get an understanding of multiple calls on trays which is can be associated with size changes and offsets by a machine operator.
- ◆ Inconsistent or nonsensical Breakage setups and recording practices made it difficult to analyze what machines were the most suspect, however...
- ◆ Availability issues led us to work with a frame company to create a frame designed specifically for this process.

# TRACER/EDGER SYNC PROCESS

## DVI Calibration Frame

- ◆ Solid steel Frame.
- ◆ Holds the shape well.
- ◆ Good circumference.
- ◆ Good for the sizing check off the edger.
- ◆ Available now.
- ◆ Any solid metal frame works.
- ◆ Contact DVI for documentation.



# TRACER/EDGER SYNC PROCESS

## Sustainable Process Improvements

- ◆ Breakage reporting becomes accurate and is a useful tool.
- ◆ Labs paying attention to stylus cycles and condition.
- ◆ Labs identifying issues tied to a specific machine...quickly.
- ◆ Operators no longer manually applying offsets.
- ◆ Internal Frame shape tracing data is more accurate.
- ◆ Communication between Front End (Tracers) and Finish Department (Edgers) staff is greatly improved.

# INSPECTION STATION <1,5,7>



# INSPECTION STATION UPDATES



**DVI Inspection Station** [Window Title]

Commands | Configure | Lensmeter Procedures | Test SDF

Tray:  Rx: **1034071599** Inv: **713692** Inspector:

Use Invoice Acct: **EYE OPTICAL**

|        | RIGHT | SPH   | CYL   | AXIS | IN/OUT_PRISM | UP/DN_PRISM | MPD  | ADD | SGHT | OCHT |
|--------|-------|-------|-------|------|--------------|-------------|------|-----|------|------|
| Rx     |       | +1.75 | -0.25 | 105  | 0.00         | D 0.25      | 32.0 | 275 | 18.0 | 14.0 |
| Actual |       | +1.66 | -0.20 | 0    | 0.00         | U 0.00      |      |     |      |      |
| Diff   |       | -0.09 | -0.05 | 105  | 0.00         | 0.25        |      |     |      |      |

|        | LEFT | SPH   | CYL   | AXIS | IN/OUT_PRISM | UP/DN_PRISM | MPD  | ADD | SGHT | OCHT |
|--------|------|-------|-------|------|--------------|-------------|------|-----|------|------|
| Rx     |      | +1.00 | -0.50 | 180  | 0.00         | D 0.25      | 32.5 | 275 | 18.0 | 14.0 |
| Actual |      | +0.97 | -0.52 | 0    | 0.00         | U 0.00      |      |     |      |      |
| Diff   |      | -0.03 | +0.02 | 0    | 0.00         | 0.25        |      |     |      |      |

Prism Imbalance

**Service**

DONE : READY FOR LENS DEPT  
BSC : NEEDS BACKSIDE COAT!!  
AR : NEEDS AR COAT

**Checkoff**

AR NEEDS AR COATED

**Breakages**

LENS STYLE:  FRAME:

MAT:  NEW

COL:  CIRC:  ETYP:

STAT:

TINT:

Buttons: Display Pattern (F5), Display Job (F4), Pass Inspection (/), Fail Inspection (\*), Fetch Results (F9), Clear Screen (F6)

New Job Note:

# SHIPPING FROM THE INSPECTION STATION (WSR)



## Individual Invoices

- ◆ Pass, ship, package at once

The screenshot displays the DVI Inspection Station software interface. A terminal window in the foreground shows a prescription for a pair of glasses. The main application window in the background contains various form fields for entering patient and lens information.

**Terminal Window Data:**

| TRAY        | ACCT   | MTRL    | PATIENT  | RX #  | SHIP | EDGE | GRD        | BILL         | PLIST |      |      |     |      |           |
|-------------|--------|---------|----------|-------|------|------|------------|--------------|-------|------|------|-----|------|-----------|
| 70063       | 1010   | PLY/PLY | 361585   |       | /    | E    |            |              |       |      |      |     |      |           |
| SPHERE      | CYL    | AXIS    | DISTANCE | NEAR  | FORM | ENC  | PRISM(I/O) | PRISM(U/D/A) |       |      |      |     |      |           |
| R +0.00     | -2.25  | 92      | 34.5     |       |      |      |            |              |       |      |      |     |      |           |
| L -0.50     | -0.75  | 90      | 36.5     |       |      |      |            |              |       |      |      |     |      |           |
| LENS STYLE  | ADD    | SGHT    | THK      | EC    | OCHT | P    | AD2        |              |       |      |      |     |      |           |
| R SV        |        |         |          |       |      |      |            |              |       |      |      |     |      |           |
| L SV        |        |         |          |       |      |      |            |              |       |      |      |     |      |           |
| BASE        | COL    | TNT     | COAT     | MA/SZ | IN   | DN   | BTHK       | PRICE        |       |      |      |     |      |           |
| R           | CLR    | SOL     | -        |       |      |      |            |              |       |      |      |     |      |           |
| L           | CLR    | SOL     | -        |       |      |      |            |              |       |      |      |     |      |           |
| FRAME       | TEMPLE | TOP     |          |       |      |      |            |              | Tint  |      |      |     |      |           |
| *L0205      |        |         |          |       |      |      |            |              | 1/2   |      |      |     |      |           |
| EYE         | 58     | BR      | 14       | LN    | 145/ | TP   | SKUL       | SET/BOX      | ETYP  | PATT | FTYP | MAT | CIRC | PRICE     |
|             |        |         |          |       |      |      |            |              |       |      |      |     |      |           |
| R1          | AX1    | R2      | AX2      | R3    | AX3  |      |            |              |       |      |      |     |      |           |
|             |        |         |          |       |      |      |            |              |       |      |      |     |      |           |
| ** SERVICES |        |         |          |       |      |      |            |              |       |      |      |     |      | PRICES ** |
| SF          | DFRM   | D100    |          |       |      |      |            |              |       |      |      |     |      |           |
| Coat        | TSE    |         | Redo     |       |      |      |            |              |       |      |      |     |      |           |

**Main Application Window Fields:**

- Tray:
- Use Invoice:
- Rx:
- Inv:
- Acct:
- Form grid with columns: CYL, AXIS, IN/OUT\_PRISM, UP/DN\_PRISM, MPD, ADD, SGHT, OCHT
- Prism Imbalance:
- Checkoff table with multiple rows.

# INSPECTION STATION CONFIGURATION <4,8,8,6,1>



Disable clear checkoffs

```

Ansi Tolerances
Power          Cylinder
Meridian      Tolerance  0.00-0.75  >0.75-2.00  >2.00-4.00  >4.00-6.00  >6.00
-----
Single Vision and Multifocals (Diopters or %4.00 = 4%)
0.00- 3.00    0.13      0.13      0.13      0.15      %4.00      %4.00
> 3.00- 6.00  0.13      0.13      0.13      0.15      %4.00      %4.00
> 6.00- 9.00  %2.00     0.13      0.13      0.15      %4.00      %4.00
Warn on Forced Pass?  Y  Ignore Results?  Y
Clear Chkoffs Ok?    Y  Ship Inspected?  Y
-----
0.00- 3.00    0.13      0.13      0.13      0.15      %4.00      %4.00
> 3.00- 6.00  0.13      0.13      0.13      0.15      %4.00      %4.00
> 6.00- 9.00  %2.00     0.13      0.13      0.15      %4.00      %4.00
> 9.00-12.00  %2.00     0.13      0.13      0.15      %4.00      %4.00
>12.00-20.00 %2.00     0.13      0.13      0.15      %4.00      %4.00
>20.00        %2.00     0.13      0.13      0.15      %4.00      %4.00
Cylinder Power  0.00-0.37  >0.37-0.75  >0.75-1.50  >1.50
Axis Tolerance  7          5          3          2
Add Power       0.00-4.00  >4.00
Add Tolerance   0.12      0.18
Warn on Forced Pass?  Y  Ignore Results?  Y
Clear Chkoffs Ok?    Y  Ship Inspected?  Y
-----
F1:SAVE  F2:NEXT-PAGE  F4:RESTORE  F5:ANSI  F7:ANSI-87  ESC:QUIT

```

# TEST SDF MENU

## SDF Troubleshooting

- ◆ Check Rx
- ◆ Mean power map
- ◆ Max curvature map
- ◆ Use in special situations for troubleshooting

**dvi** DVI Inspection Station

Commands   Configure   Lensmeter Procedures

Tray: 44352

334098

Use Invoice

334098\_rxTest.txt - Notepad

File Edit Format View Help

distance vision, eye = 1

sph at distance sighting circle = 2.48792

cyl, cyl axis at distance sighting circle = -0.28063, 138.561

near vision, eye = 1

sph at near sighting circle = 3.64004

cyl, cyl axis at near sighting circle = -0.156937, 42.6715

distance vision, eye = 0

sph at distance sighting circle = 1.8918

cyl, cyl axis at distance sighting circle = -0.205822, 50.3437

near vision, eye = 0

sph at near sighting circle = 3.16497

cyl, cyl axis at near sighting circle = -0.265575, 115.842

Test SDF

Max Curvature Map

Mean Power Map

Check Rx



# TEST SDF MENU

## SDF Troubleshooting

- ◆ Check Rx
- ◆ Mean power map
- ◆ Max curvature map

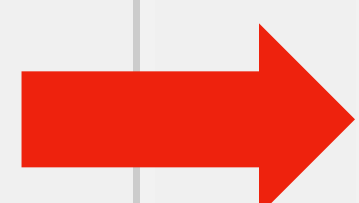
**dvi** DVI Inspection Station

Commands   Configure   Lensmeter Procedures   **Test SDF**

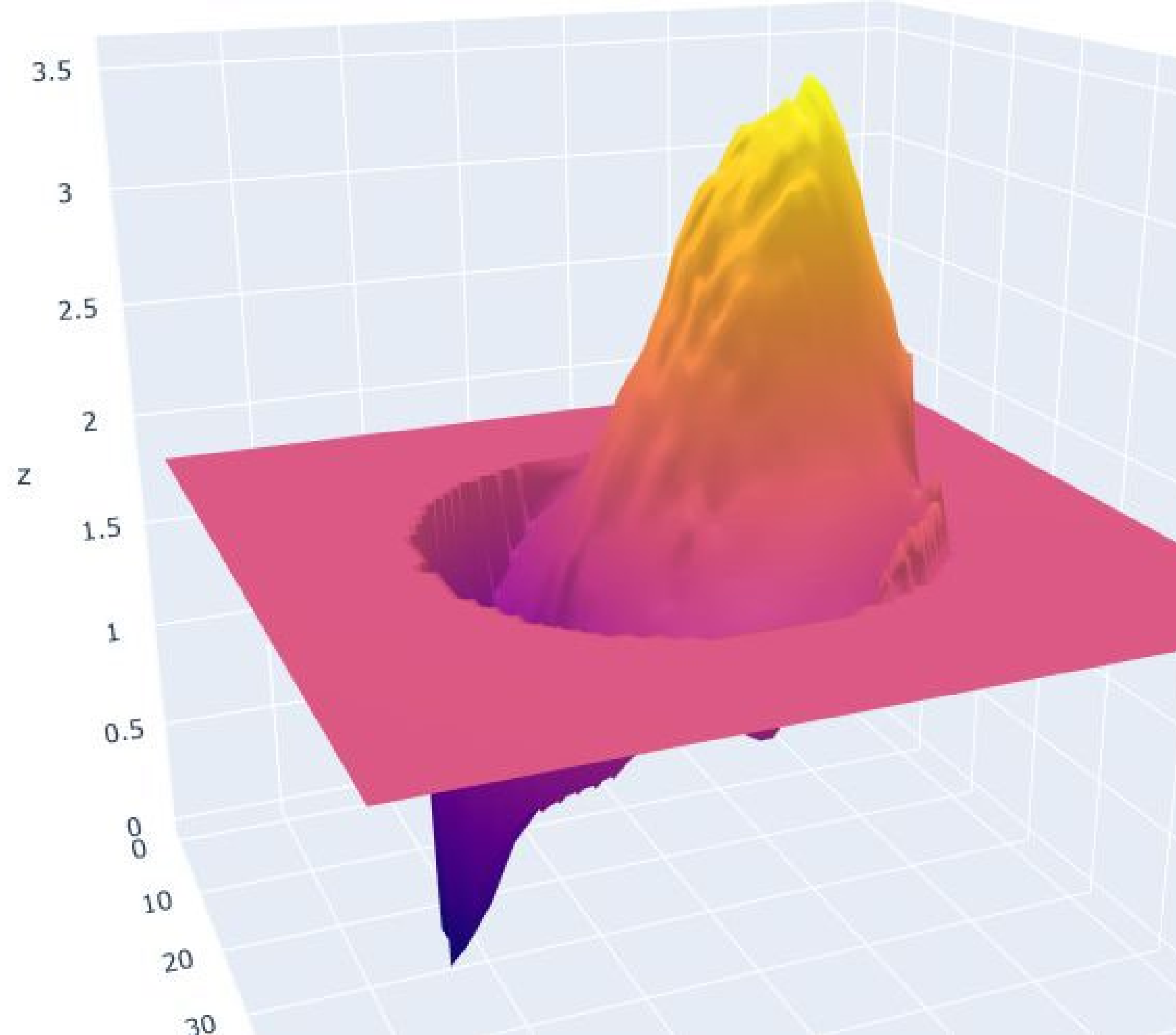
Tray:

**334098**

Use Invoice



- Max Curvature Map
- Mean Power Map**
- Check Rx



# TEST SDF MENU

## SDF Troubleshooting

- ◆ Check Rx
- ◆ Mean power map
- ◆ Max curvature map

**dvi** DVI Inspection Station

Commands    Configure    Lensmeter Procedures

Tray:

**334098**

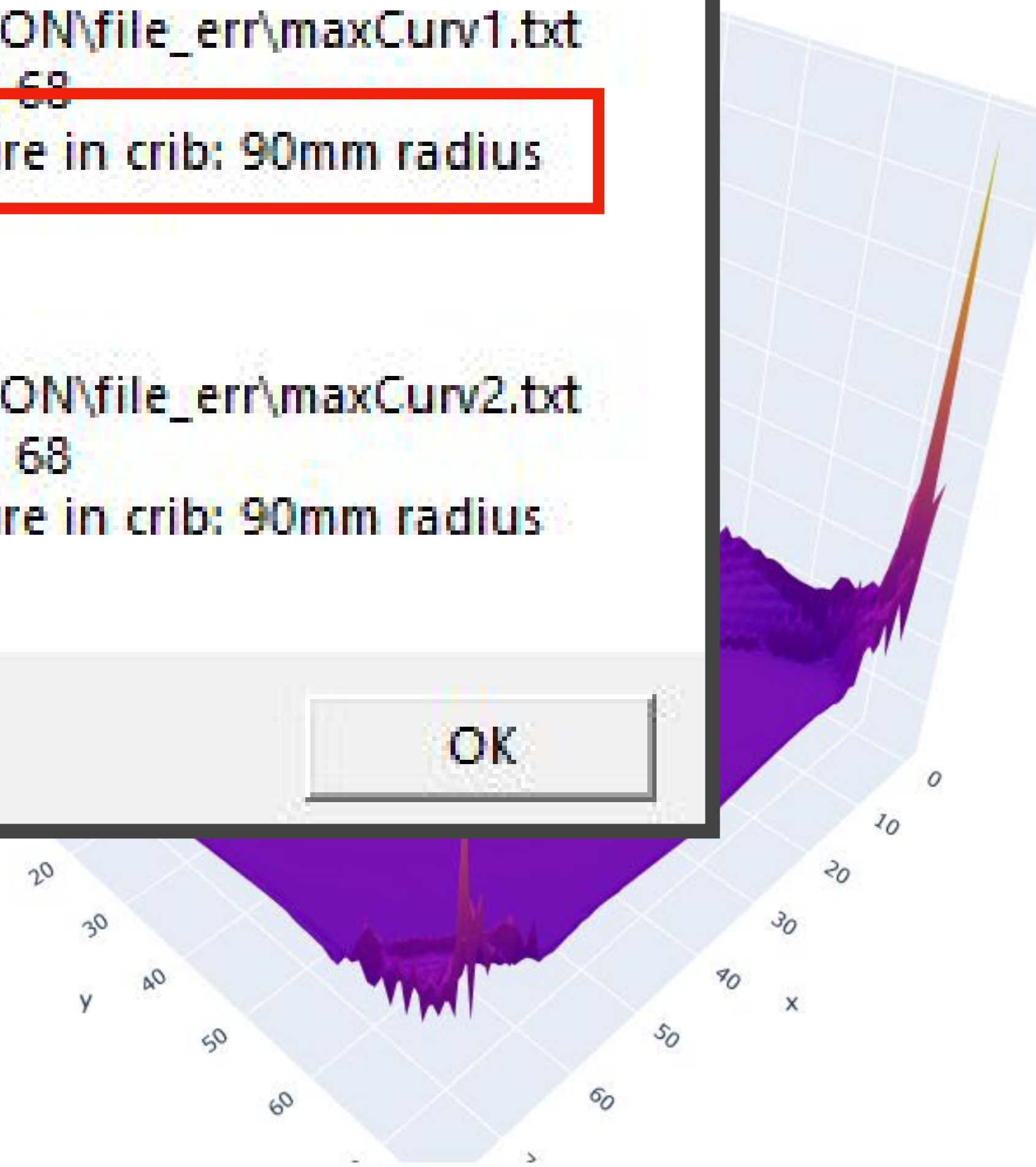
Use Invoice

Success

File 1  
eye: 1  
path: J:\VISION\file\_err\maxCurv1.txt  
side length: 68  
max curvature in crib: 90mm radius

File 2  
eye: 0  
path: J:\VISION\file\_err\maxCurv2.txt  
side length: 68  
max curvature in crib: 90mm radius

OK



**DIGITAL  
VISION**

**THANK YOU**

Contact Digital Vision:

(503) 231-6606 | [info@thedvi.com](mailto:info@thedvi.com)