OPTIMIZING SURFACING SETUP

Best Practices for block support, thickness control, chatter elimination, saving polishing pads

Dan Lundberg – Aaron Hagen – Stan Arrigotti

Optimizing Surfacing Setup

- **Objectives**
  - Maximize block support of lens
  - Minimize/eliminate chatter
  - Optimize thickness control
  - Optimize cribbing
  - Eliminate destruction of polishing pads (Multi-FLEX?)
  - Maintain high-volume surfacing throughput
  - Simplify blocking process

Optimizing Surfacing Setup - Params

- **Params Set-up (assumes digital surfacing / complex cribbing / digital fill)**
  - **Tools**
    - Build Digital Surface: **True**
    - Digital Polish: **True**
    - Polish Restrict: **True**
    - Complex Crib: **True**
    - Digital Fill: **True**
  - **Layout**
    - Digital Fill Intrusion Limit: **3.00**
  - **Cribbing**
    - Crib Uncuts: **True**
    - Crib Uncuts Close (with frame tracing): **True**
    - Complex Crib Thickness: **0.8**
    - Complex Crib Block Clearance: **0.50**

Optimizing Surfacing Setup

Block Selection Setup:

Digital

- Block Size #1: **53mm**
- Block Size #2: **58mm**
- Block Size #3: **63mm**
- Block Size #4: **68mm**

Basic Selection Criteria:

- Tries to keep everything on the **58mm** block but…..
  - Selects larger block:
    - Rx has potential for chatter
    - To provide seg clearance on a bifocal- **63mm**
  - Selects smaller block:
    - Achieve desired thickness

Optimizing Surfacing Setup

Fortyeight (specified dept. if STOP THICKNESS Warning)

- Block Size #1: **48 mm (48 30)**
- Block Size #2: **50mm**
- Block Size #3: **0**
- Block Size #4: **0**

Picks standard 50mm block unless 48mm needed for seg clearance or thickness

Slow-Macro

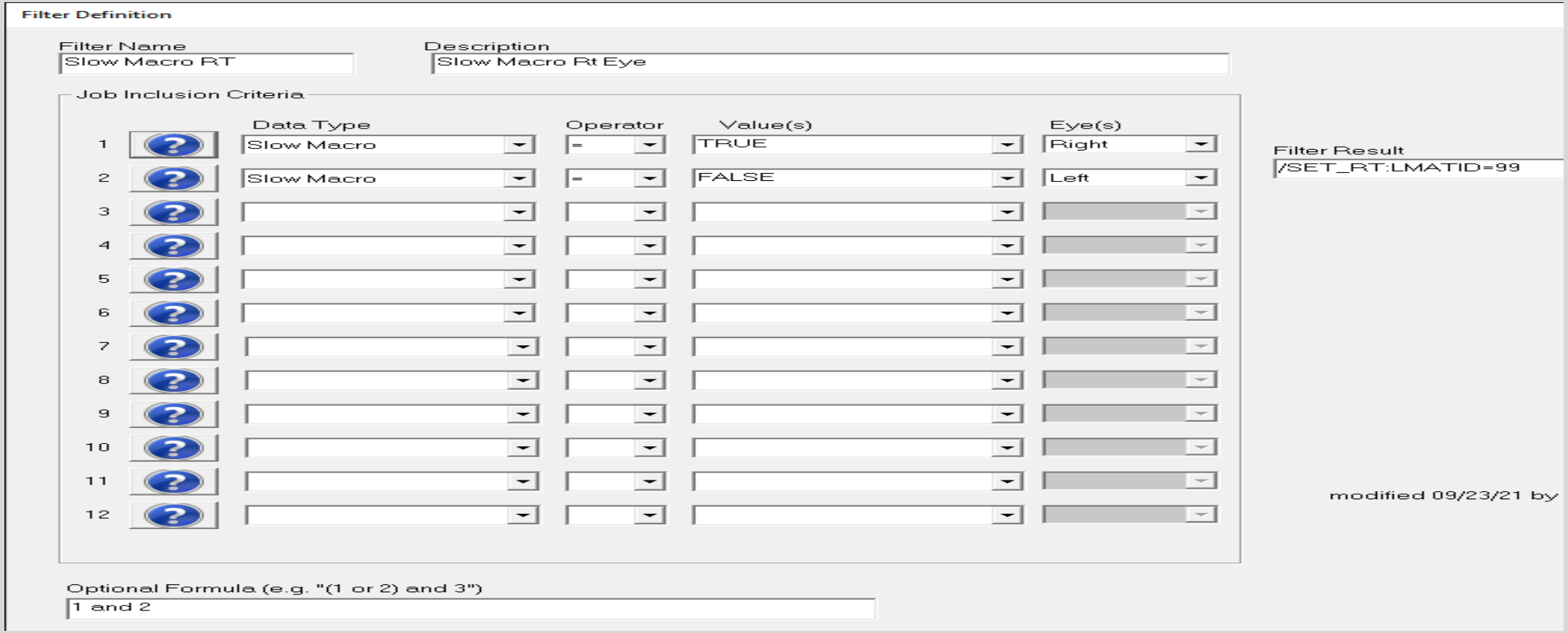
SLOW-MACRO – slowing down the generator:

- Activates:
  - Smaller block selected to achieve thickness if:
    - Chatter is likely
    - Block < 53mm
- Avoids:
  - Chatter
  - Knocking lens off small block
- Note:
  - With proper setup, very few jobs require SLOW-MACRO
  - Will not activate on a 53mm block unless chatter is an issue

Optimizing Surfacing Setup

SLOW-MACRO – slowing down the generator:

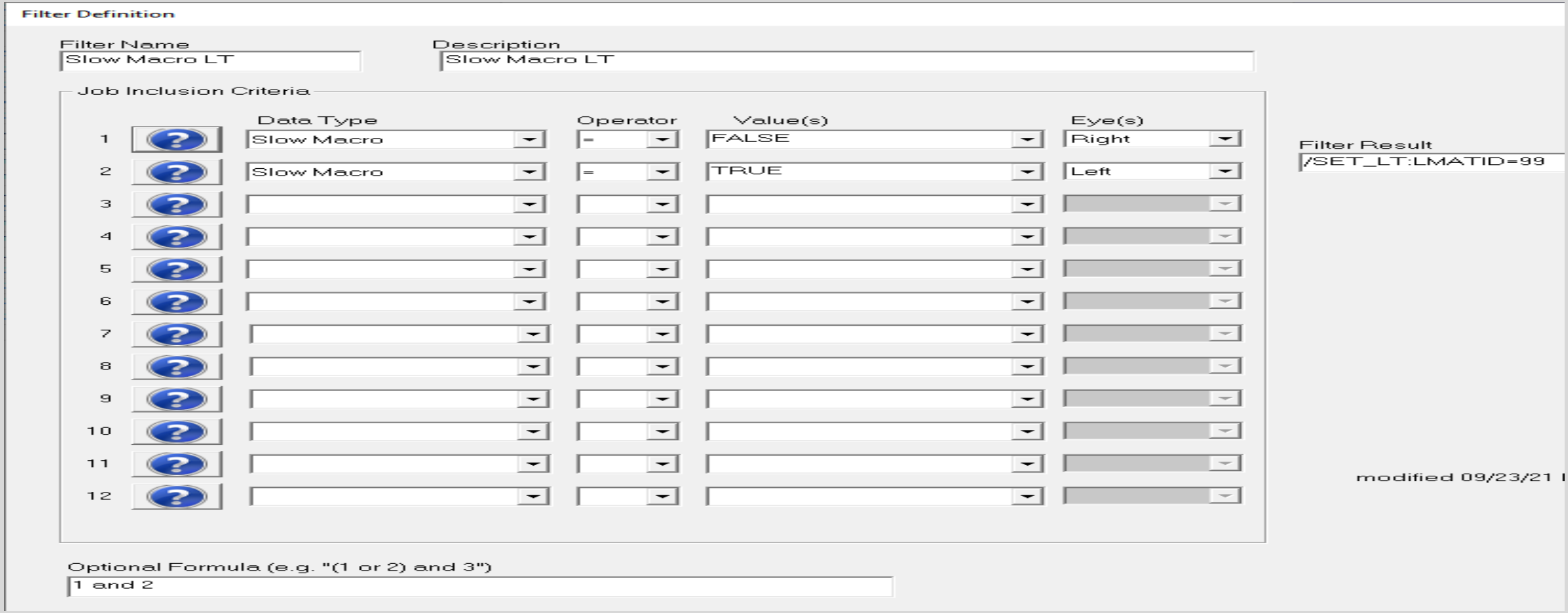
- Machine Wizard Filter – Right Eye Only



Optimizing Surfacing Setup

SLOW-MACRO – slowing down the generator:

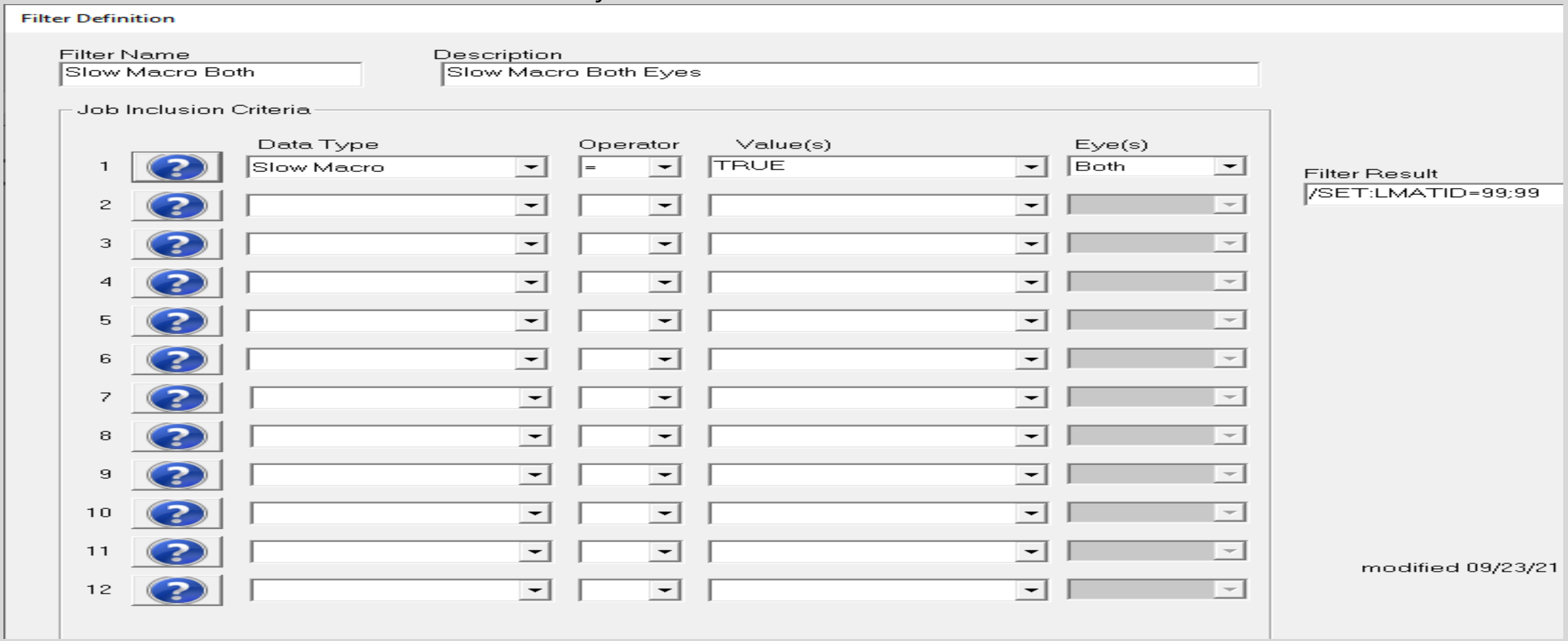
- Machine Wizard Filter – Left Eye Only



Optimizing Surfacing Setup

SLOW-MACRO – slowing down the generator:

- Machine Wizard Filter - Both Eyes



Optimizing Surfacing Setup

1 Week's Work (report built with archive reporting)

		53 MM	58 MM	63 MM	68 MM	Splits	Slow Macro	Total
Grand Total		66	5968	275	165	4	79	6474
		1.0%	92.2%	4.2%	2.5%	0.1%	1.2%	

Optimizing Surfacing Setup

Polisher Routing

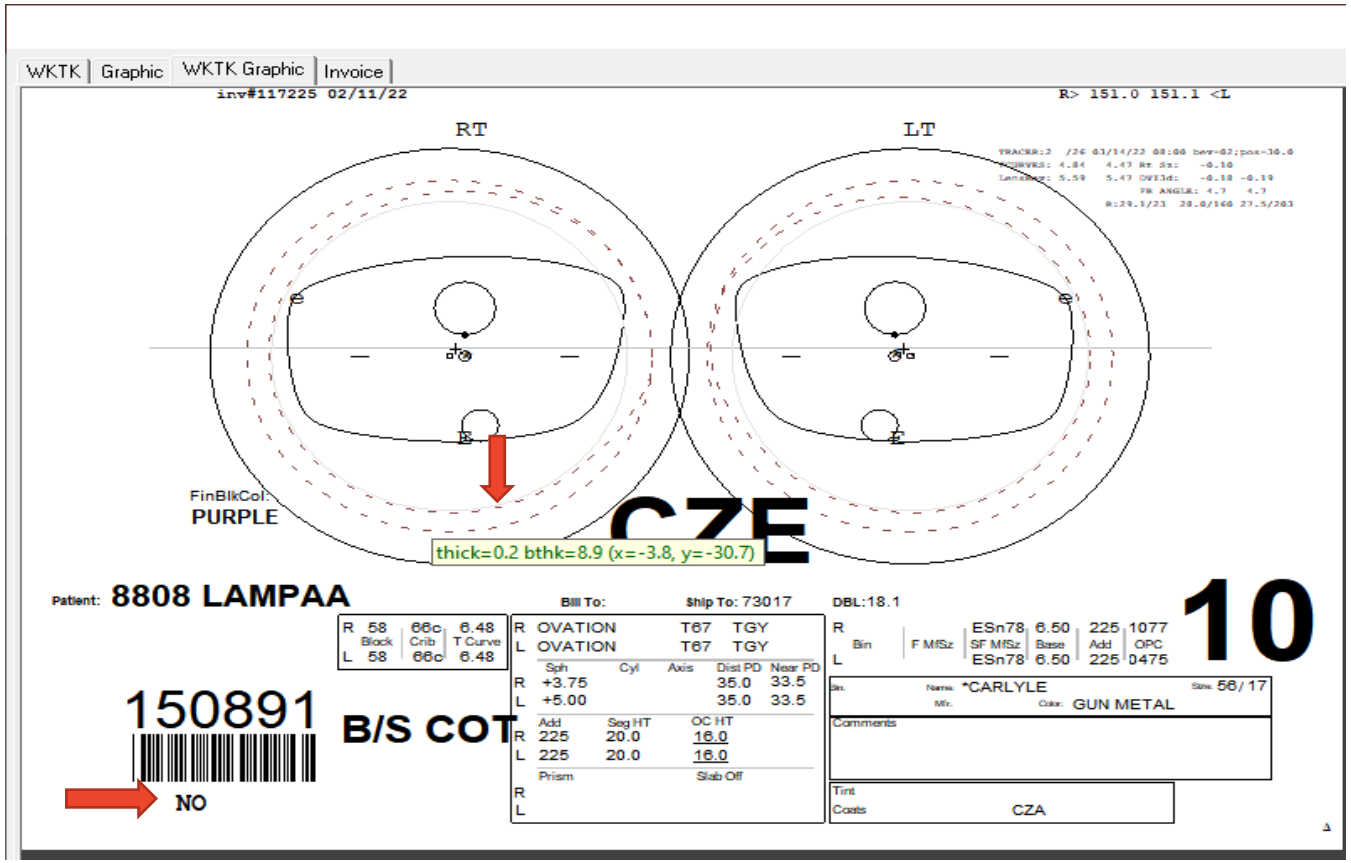
- **Make use of new software that identifies “Thickness at Block”**
- **Identify thin edges 1mm from surface block**
- **Routing logic to appropriate polisher (manual sort or conveyor)**
- **Minimize tearing of polishing pads, reduce breakage**

Polisher Routing

Thickness at Block

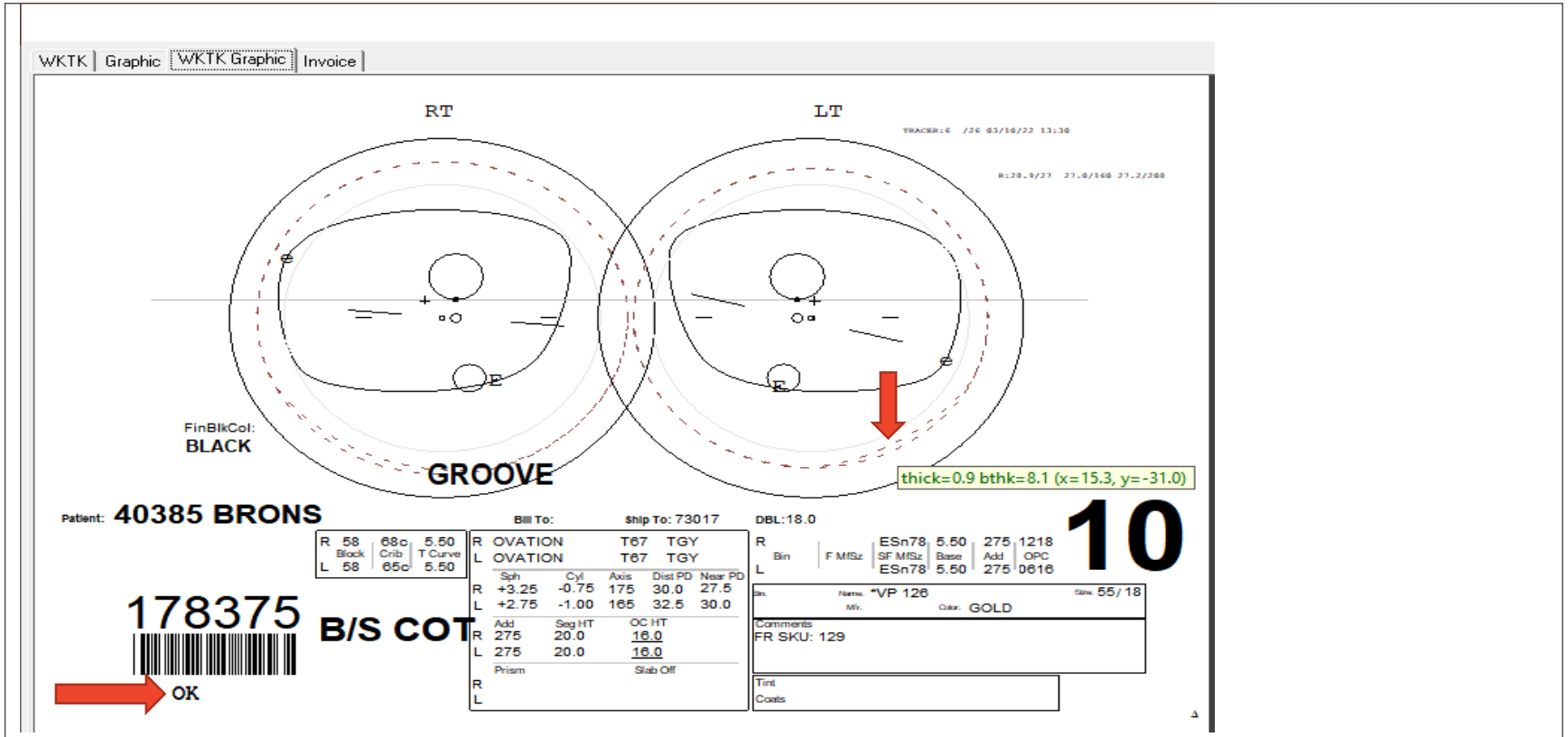
- .2mm thick 1mm from block
- "NO" direct to gentle edger

Note: Satis/Loh "Evolution Process" available MultiFlex2, upgradable on MultiFlex1 less aggressive



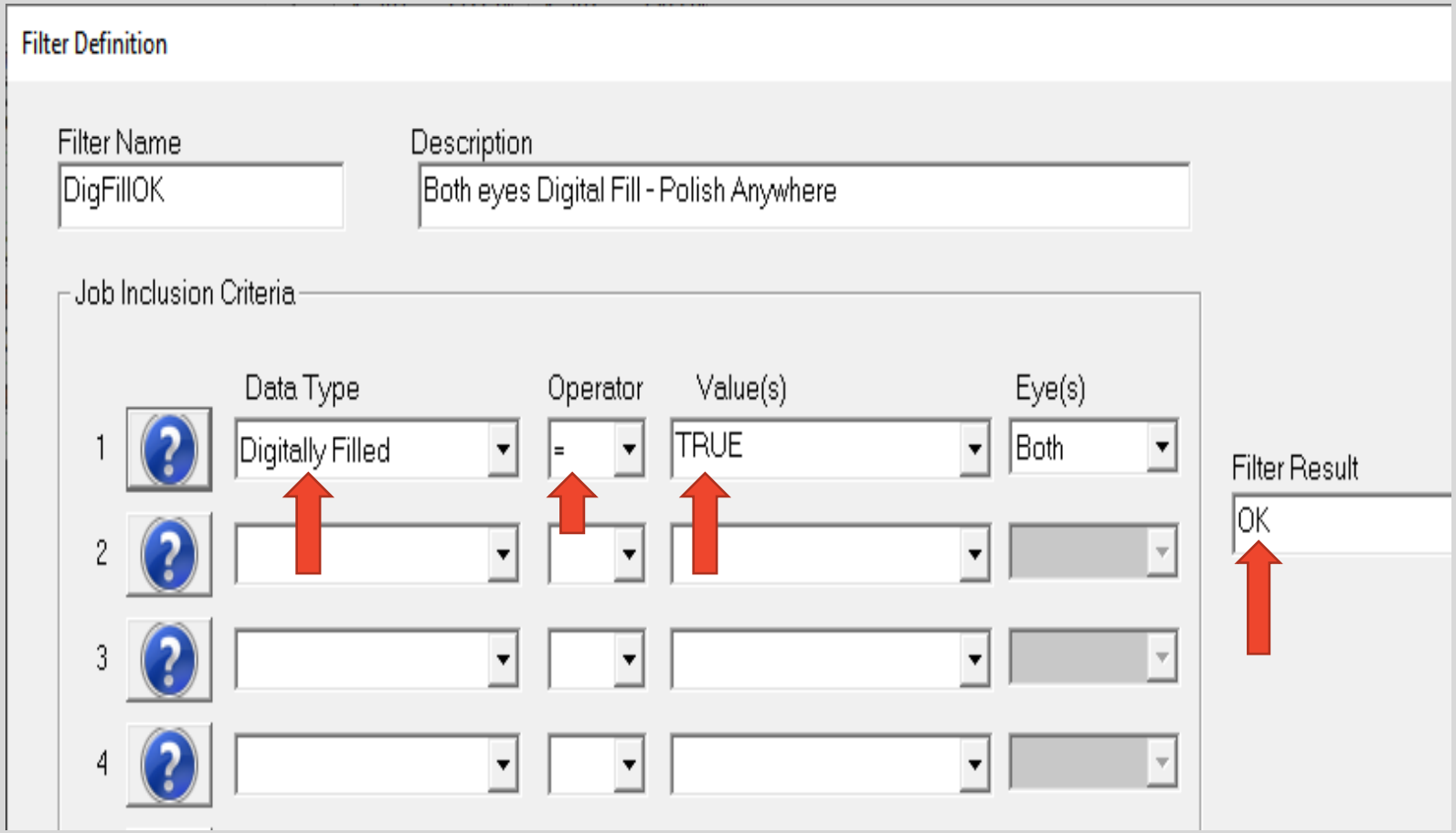
Polisher Routing

- **.9mm thick 1mm from block**
- **“OK” polish anywhere**



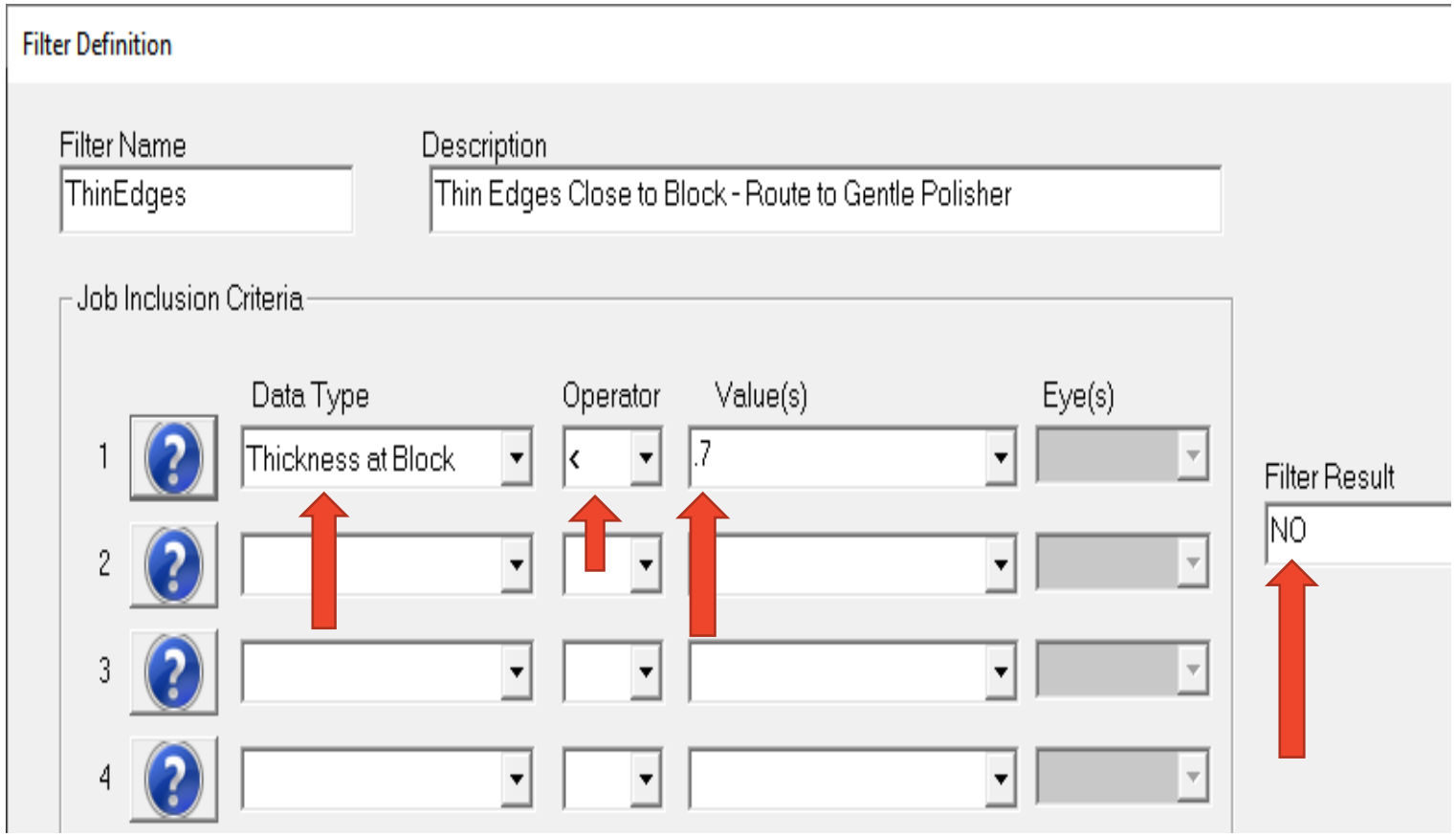
Polisher Routing Filter

- **Digital Fill on both eyes – No thin edges**
- **All polishers can handle**
- **Print "OK" on Work Ticket or direct conveyor**



Polisher Routing Filter

- **Thin close to the block**
- **Problem on some polishers**
- **Print "NO" on Work Ticket or direct conveyor**



Polisher Routing Filter

- **No thin edges**
- **Good on all polishers**
- **Print "OK" on Work Ticket or direct conveyor**

Matching Block Sizes

- Set up in Params departments (Blocks)
  - Match block = true
- Matches the smaller of the two blocks (e.g. (R) 58mm, (L) 63mm puts both on 58mm)
- Will activate SLOW MACRO if potential chatter issues
- Will not match blocks if two sizes apart – very rare - (e.g. (R) 58mm, (L) 68mm)
- Simplifies blocking process, reduces errors
- Does not affect a lot of jobs, <2%

Optimizing Surfacing Setup

Thank you!