

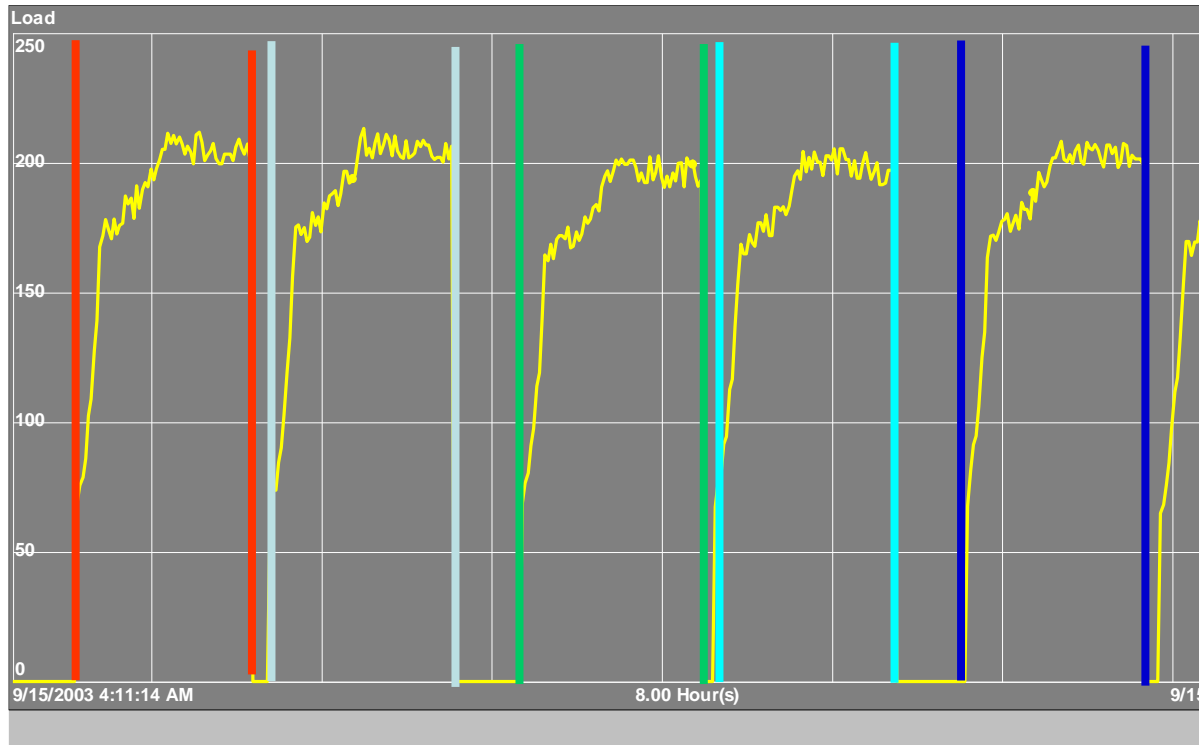


# *Process & System Analysis Via Event Framing*

*OSIsoft T&D User Conference  
Sacramento, CA  
September 18, 2003*

# What is Event Framing?

- **Capturing the Start & End of Fixed or Variable Time Length Events**



- **Once you have the Time Frame captured, you can look at any Variable in PI or from any other data source, through PI-Batch tools**

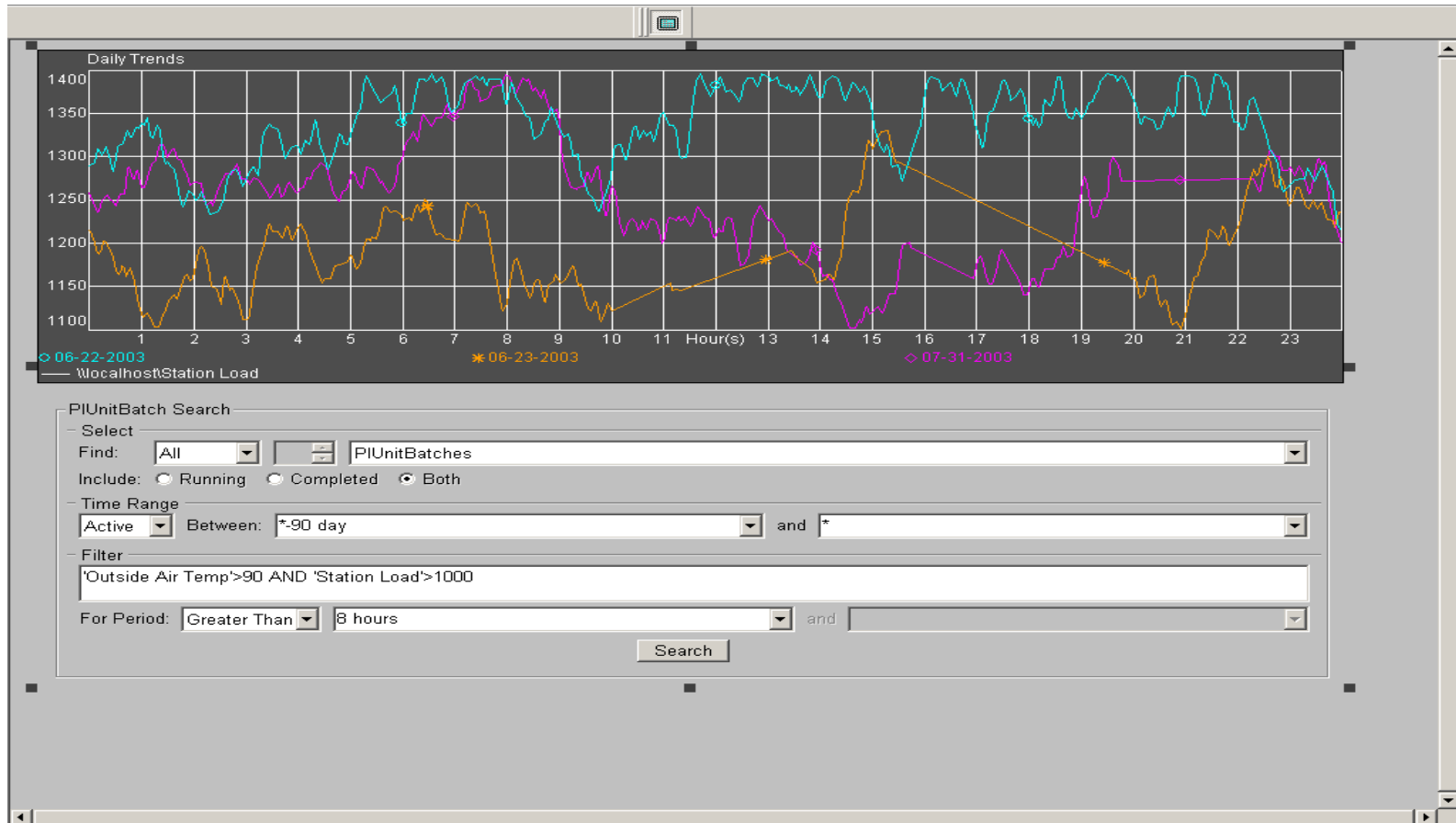
# Event Framing & Monitoring in a “Non-Batch” Industry\*

- **Frame any repeatable time segment with process events**
  - *Fixed Time Frames*
    - *Days*
    - *Shifts*
    - *Weeks*
  - *Variable Time Frame Events*
    - *Alarm Events*
      - ✓ *Static Alarm Excursions*
      - ✓ *Dynamic Alarm Excursions*
    - *Equipment Start-up and Shut Down*
    - *Breaker Open/Closed Events*

**\*The case for PI-Batch in the land of continuous operations**

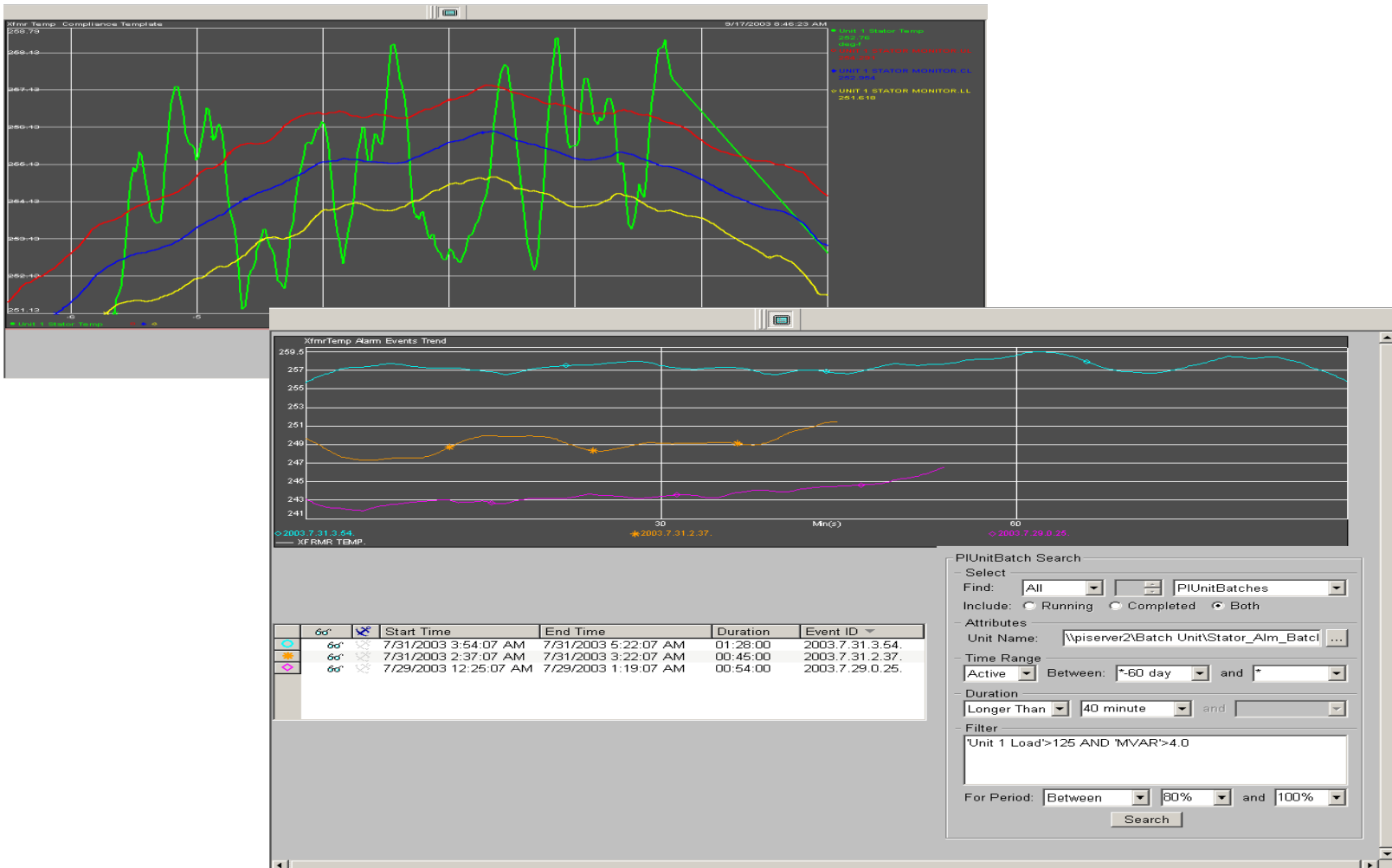
# Event Framing & Monitoring in a “Non-Batch” Industry\*

- **Fixed Time Frame Event**
  - e.g., Days



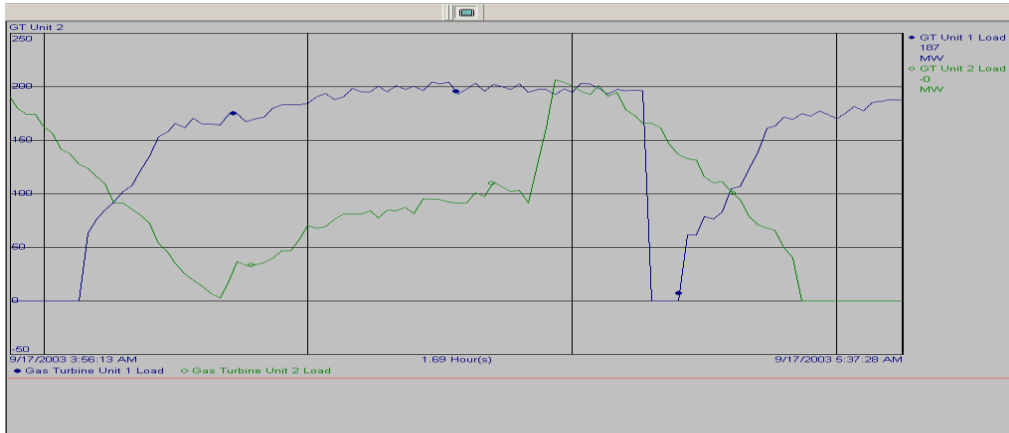
# Event Framing & Monitoring in a “Non-Batch” Industry

- **Variable Time Frame Events**
  - e.g., Alarm Condition Events



# Event Framing & Monitoring in a “Non-Batch” Industry\*

- **Variable Time Frame Events**
  - e.g., Equipment Startup & Shutdown Events



	Start Time	End Time	Duration	Unit Name
🔵	9/17/2003 5:08:10 AM	9/17/2003 6:13:52 AM	01:05:42	R-2401
🟡	9/17/2003 3:59:31 AM	9/17/2003 5:05:12 AM	01:05:41	R-2401
🟠	9/17/2003 2:31:30 AM	9/17/2003 3:37:11 AM	01:05:41	R-2401

**View Ramp-Up in Progress**

PIUnitBatch Search

Select:  PIUnitBatches

Find:

Include:  Running  Completed  Both

Attributes: Unit Name:

Time Range: Active: Between:  and

Duration: Any Length:  and

Filter:

For Period:  and

## Search and display, Events, Unit Events and Sub Events

**Batch Definition**

Main | Layout | Settings

Search Parameters

Find:

Include:  Running  Completed  Both

Batch ID:

Product:

Unit Name:

Time & Duration:

Active:  and

Longer Than:  and

Search [Clear] [Advanced Search] [Edit...]

6d*	6d*	Start Time	End Time	Duration	Event ID
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9/18/2003 7:13:03 AM	9/18/2003 8:22:13 AM	01:09:10	2003.9.18.7.13.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7/31/2003 3:54:07 AM	7/31/2003 5:22:07 AM	01:28:00	2003.7.31.3.54.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7/31/2003 2:37:07 AM	7/31/2003 3:22:07 AM	00:45:00	2003.7.31.2.37.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7/29/2003 12:25:07 AM	7/29/2003 1:19:07 AM	00:54:00	2003.7.29.0.25.

Available Aliases:

Common  All

PT-BaGen

Add Alias -> Tag Search... Data Sets... Custom Placeholders

Tags/Aliases: DS XFRMR TEMP.

OK Cancel Help

Ready

# PI-Batch View for Event Framing & Tracking

- 4 Parts – optionally display all or some
  - All parts interact with each other

**Search**

**Results**

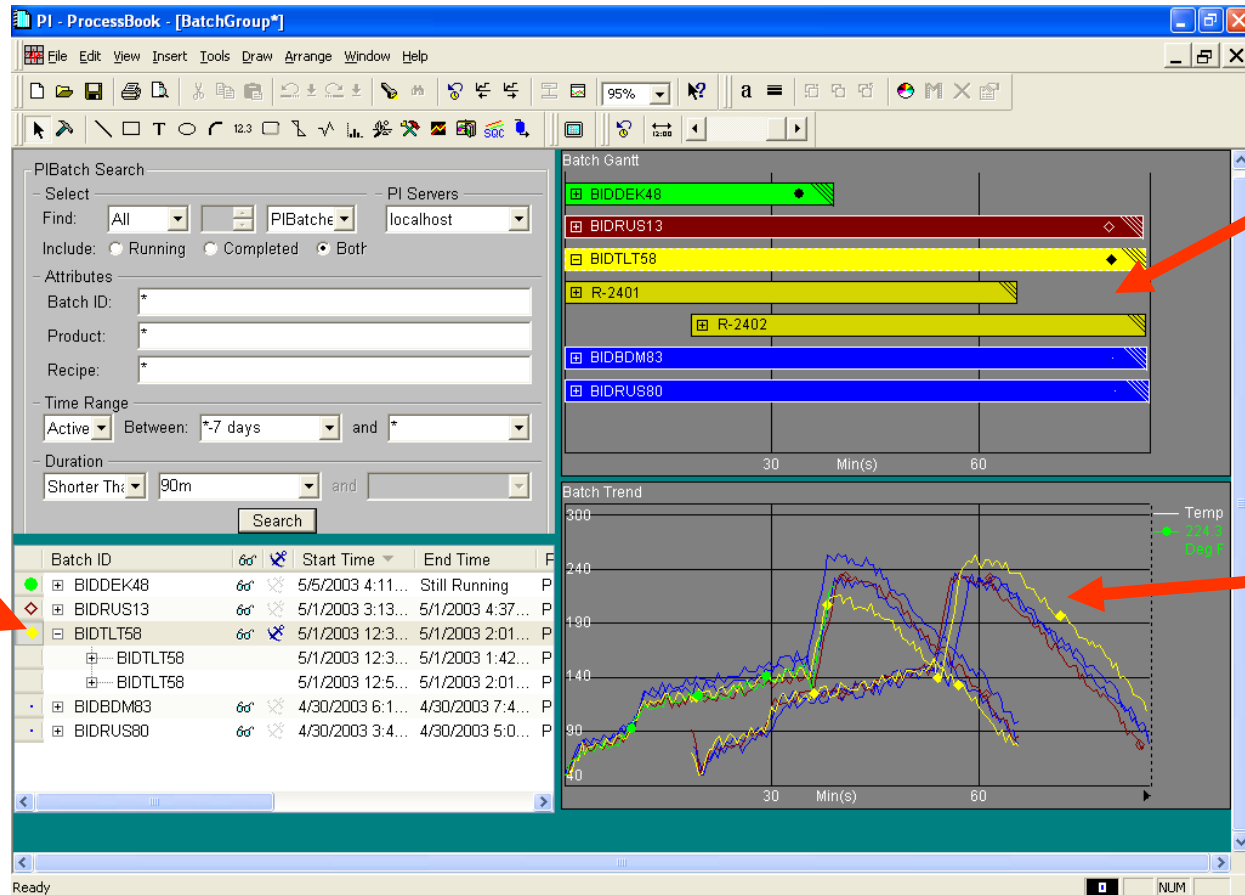
Batch ID	Start Time	End Time	Product
BIDRUS80	5/5/2003 1:37...	Still Running	PrRTS5
BIDRUS13	5/1/2003 3:13...	5/1/2003 4:37...	PrBDM87
BIDTL758	5/1/2003 12:3...	5/1/2003 2:01...	PrBDM1
BIDBDM83	4/30/2003 6:1...	4/30/2003 7:4...	PrRUS24
BIDRUS80	4/30/2003 3:4...	4/30/2003 5:0...	PrTLT71
BIDDEK24	4/28/2003 2:2...	4/28/2003 3:4...	PrRTS91

**Gantt Chart**

**Trend**



All parts interact with each other

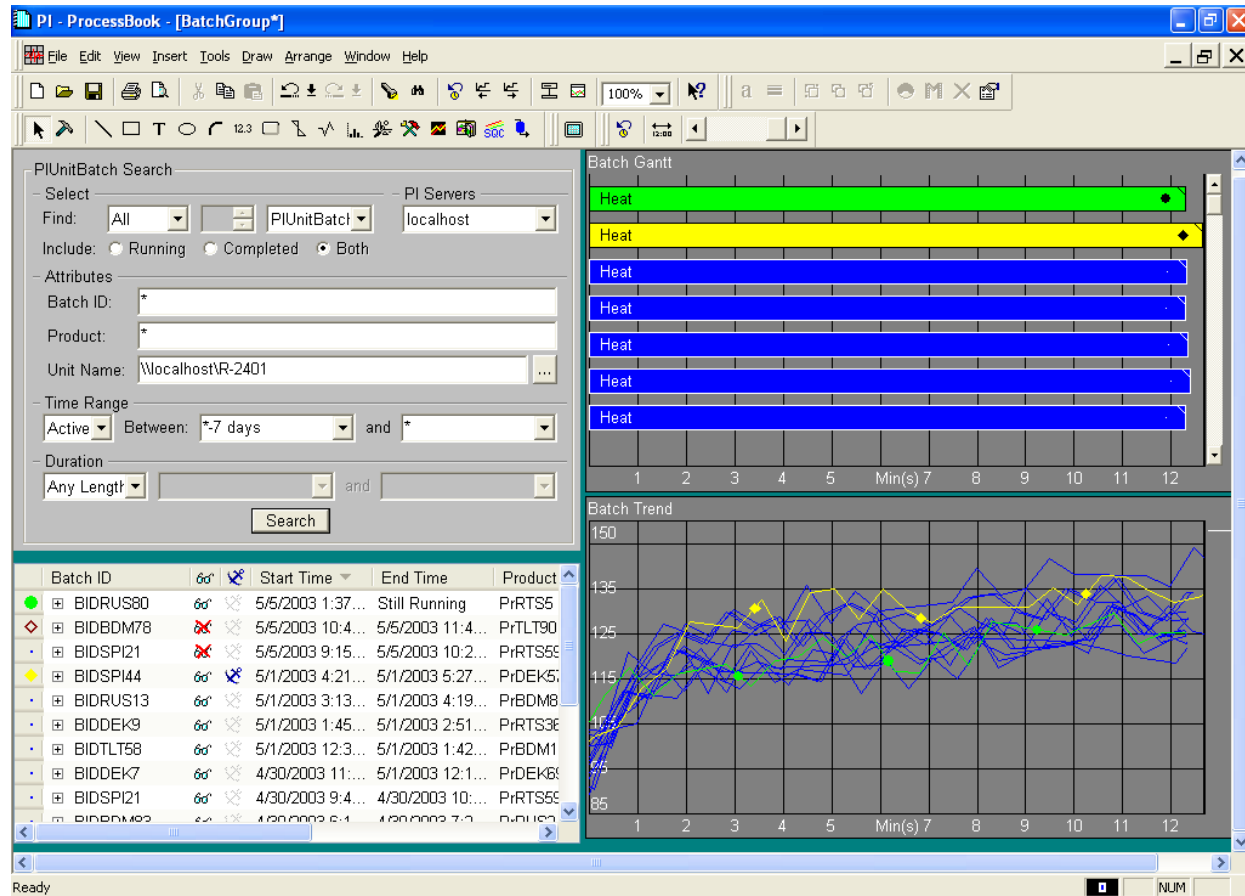


Expands the Gantt Chart

Expanding this Event

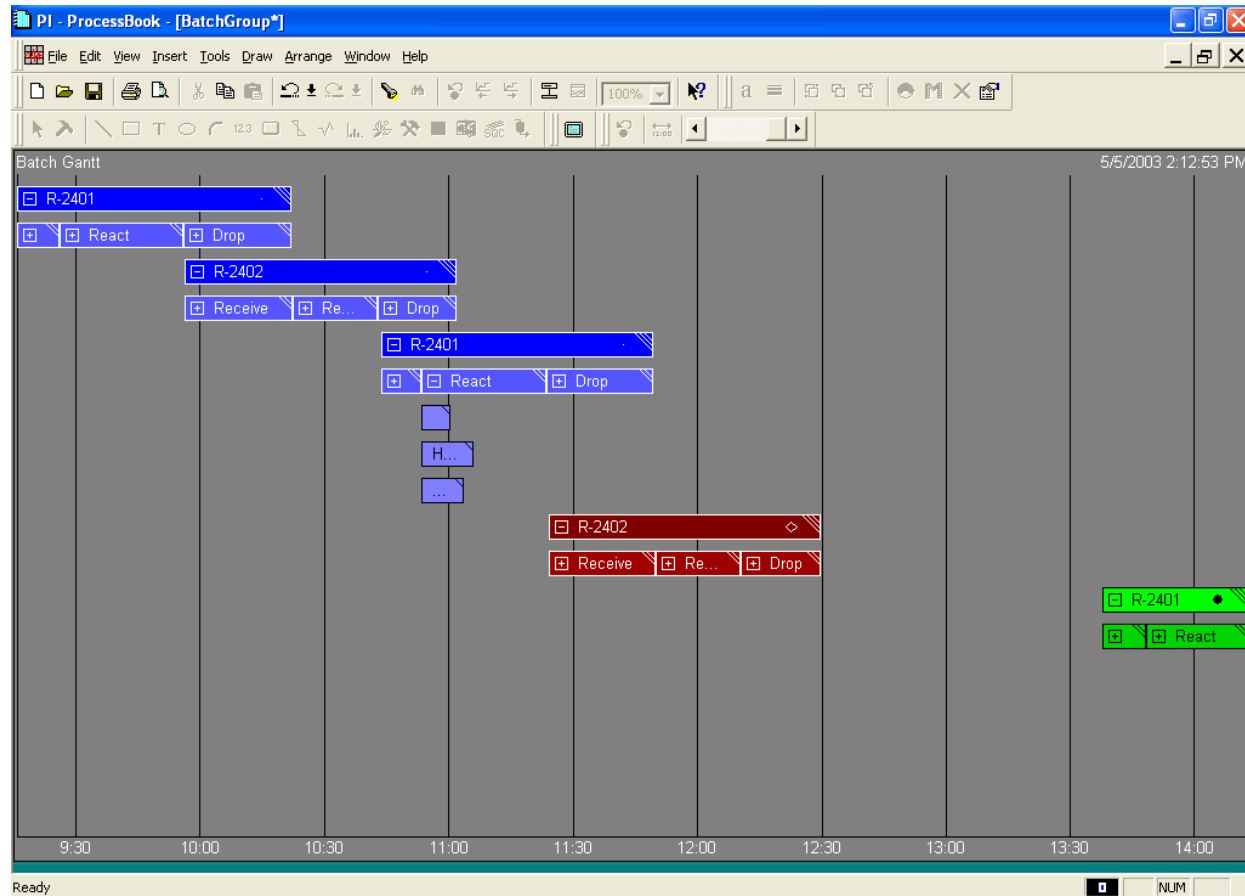
And selects the Trace

Align trends to an Entire Event, Operation or Phase (subsets of the Main Event) and compare durations



# PI-Batch View for Event Framing & Tracking

Use the Gantt Chart to view and compare any variable in Real-Time over multiple events



# *PI Batch aka Event Framing & Tracking*

- *Load Data Analysis*
- *Process Analysis*
- *Equipment Performance Compliance*
- *Repeatability Studies*
- *Equipment Effectiveness*
- *Reliability Analysis*
- *Maintenance Analysis*