

# SmartParts Monitoring

*Real-Time monitoring system that provides a central display of all machines' status*

**The ShopView** is a central "heads up display" is the command center for your entire drill room. The web-based status view instantly tells you and your drill operators where the trouble is... and where it isn't. One glance at the display, and your operators know right where to go to keep your drilling and routing machines running.

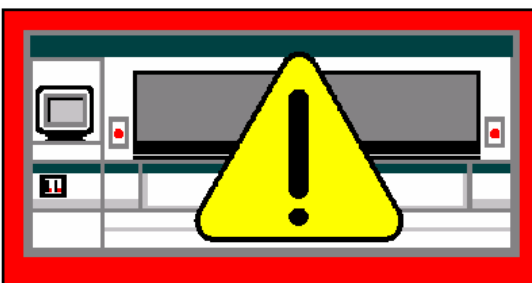
- Runs on any 32-bit Windows PC
- Reports to a standard web browser (Netscape or Internet Explorer)
- Instant notifications (pager or email)
- Uses either machine software or monitoring hardware (sold separate)
- Update every few seconds

## Provide summary reports

- Real-Time Status report
- Utilization reports
- Tracking reports
- Error reports
- Production reports

## Zoom In

- With the "zoom in" capabilities a supervisor can pick a machine and see the state code, the error code & how long it has been in the current state or error.



Hitachi 10D  
Job: T8016  
Machine Status: Stopped during load  
Time at current state: 00:00:57  
Error: USED TOOL TOO HIGH



**ShopView** will free your operators from having to watch running machines; they can spend their time more productively. They can prepare the coming loads, load tool cassettes, and perform all of the other "care and feeding" tasks of drilling and routing, without fear that they'll overlook that stopped machine on the far side of the drill room. That saves time and money, especially in times when fewer operators must run more machines.

## Cost Justification: You can't afford not to have it.

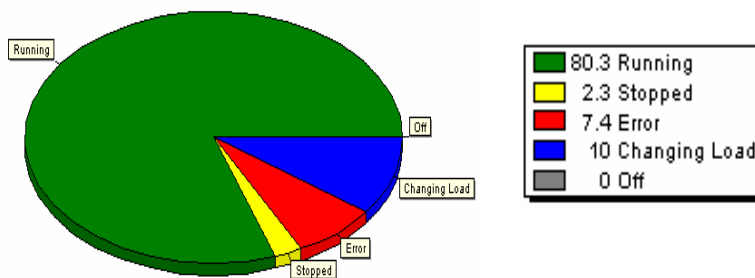
In our studies, the ShopView system reduces your machine stop time by a minimum of fifteen minutes a day. It also frees up over an hour a day of each machine operator's time, so they can do other work. In a three-shift operation, the daily cost savings is worth about \$40 per machine, and the three hours of added operator labor availability is worth about \$60.

Even in an eight-machine shop, the cost savings of \$380 per day will pay for the complete system in less than four months. So this system is an investment which pays about a 300% return in the first year! That's why companies invest in FASTechnologies products like the ShopView system, especially in a difficult market.

# SmartParts Reports

## Summary Reports

SmartParts will record events reported by the machine controller. From this recorded history of machine events, the following reports will be generated and distributed in HTML form over the company Ethernet.



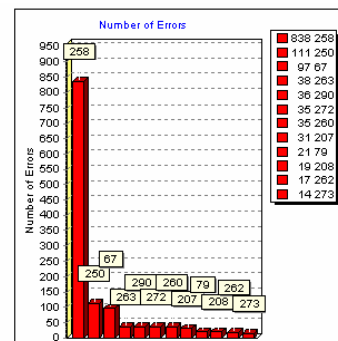
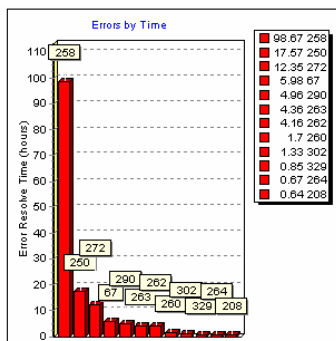
## Tracking report

Reports will be produced by Work Order or Tool Number. They will show where and when the panels were drilled, and the time expended in drilling.

## Errors report

Reports will provide summaries of errors, ordered by error type or machine number.

Idle time accruing to each error type will be presented. Selectable time breakdowns will be by hour, shift, day, week, and month.



Errors sorted by most time:

Time	Err#	Message	#	Err#	Message
98:40:15	258	TOOL DIAMETER ERROR, DIAG.181	838	258	TOOL DIAMETER ERROR, DIAG.181
17:34:10	250	LIMIT OF DRILL LIFE	111	250	LIMIT OF DRILL LIFE
12:21:00	272	DRILL BIT(S) BROKEN (P.F. TOOL	97	67	WAITING CYCLE START
5:58:34	67	WAITING CYCLE START	38	263	TOOL HEIGHT TOO HIGH
4:57:40	290	TOOL CHUCK DOWN POS. ERROR	36	290	TOOL CHUCK DOWN POS. ERROR
4:21:52	263	TOOL HEIGHT TOO HIGH	35	260	TOOL HEIGHT TOO LOW
4:09:30	262	TOOL DEPOSIT ERROR	35	272	DRILL BIT(S) BROKEN (P.F. TOOL
1:42:09	260	TOOL HEIGHT TOO LOW	31	207	TOP OF "MACHINE REVERSE"
1:20:01	302	LOW AIR PRESSURE	21	79	WAITING CYCLE START
0:50:44	329	WAITING CYCLE START	19	208	END OF "MACHINE REVERSE"
0:40:28	264	USED TOOL TOO HIGH	17	262	TOOL DEPOSIT ERROR
0:38:29	208	END OF "MACHINE REVERSE"	14	273	TOOL REMAINS IN COLLET or P.F.

Errors sorted by most occurrences:

# ShopView Notifications



**DRILL #12 END OF LOAD**  
**DRILL #17 STOPPED: TOOL STUCK**

## Automated Pager Alarms Reduce Wasted Time

In the traditional drill room, the operators spend much of their time walking around, checking to see if any machines have stopped. That's a waste of time, because every time an operator checks a machine and it's still running, he's accomplished nothing. No added value, zero profit.



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