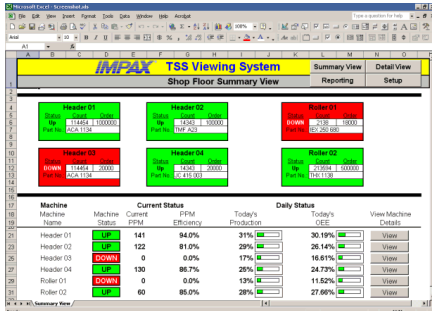




TIME SAVER SYSTEMS

IMPAX TSS-NET Software

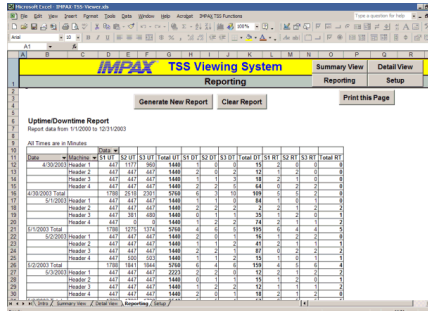
IMPAX TSS-NET links IMPAX TSS-4, TSS-6, TSS-8 and TSS units to a personal computer or network, for data collection and shop floor management. This system enables the user to get up-to-the-minute information about the shop floor machinery and fine-tune the manufacturing process as needed, resulting in increased productivity and improved quality.



VIEWING STATUS

TSS-NET's viewing mode gives live tracking of each machine's status, each operator's status, and each part's status at any computer with the software. Real-time shop floor information is shown, including:

- Machine Name and Status
- Parts Made Count
- Tool Usage Counts
- Maintenance Task Counts
- Speed of Production (PPM) and Efficiency
- Uptime and Downtime Minutes by Shift
- Response Times to Machine Faults by Shift
- Downtime Reasons: Occurrences and Minutes
- Current Job Information
- Operating Efficiencies and Effectiveness (OEE)
- Production Potential



DATA COLLECTION

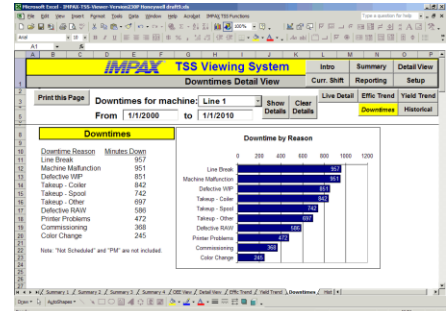
TSS-NET supports automatic data collection. Machine data and the downtime log are collected daily, and part and operator data are collected as parts are completed and operators log in. Data can be collected automatically across an Ethernet network, or by directly connecting to each TSS unit once daily. After collection, the data can be analyzed and reviewed via the TSS-NET program.

This data is stored in a comma-delimited format so that it can be imported into Excel or other programs for further analysis and evaluation. Data may also be streamed to other database programs, depending on the required formats.

SYSTEM SETUP

TSS-NET's setup mode allows entry and editing of:

- Machine Names
- Downtime Reasons
- Clock Settings and Daily Schedules
- Ideal Running Rates
- Pending Part Information
- Data Collection Settings
- Message Logging Settings



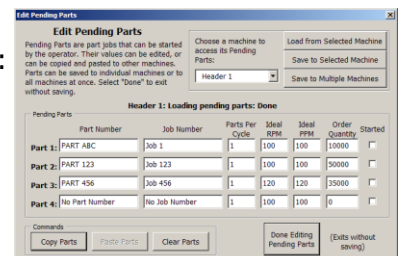
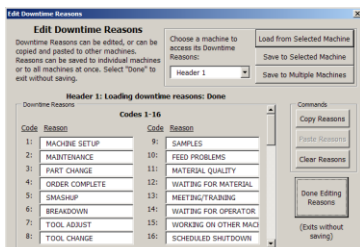
REPORTING

TSS-NET's viewing mode includes basic printing functionality, for easy report generation.

TSS-NET also includes a variety of customizable reports, to view historical data logs, and create aggregate reports.

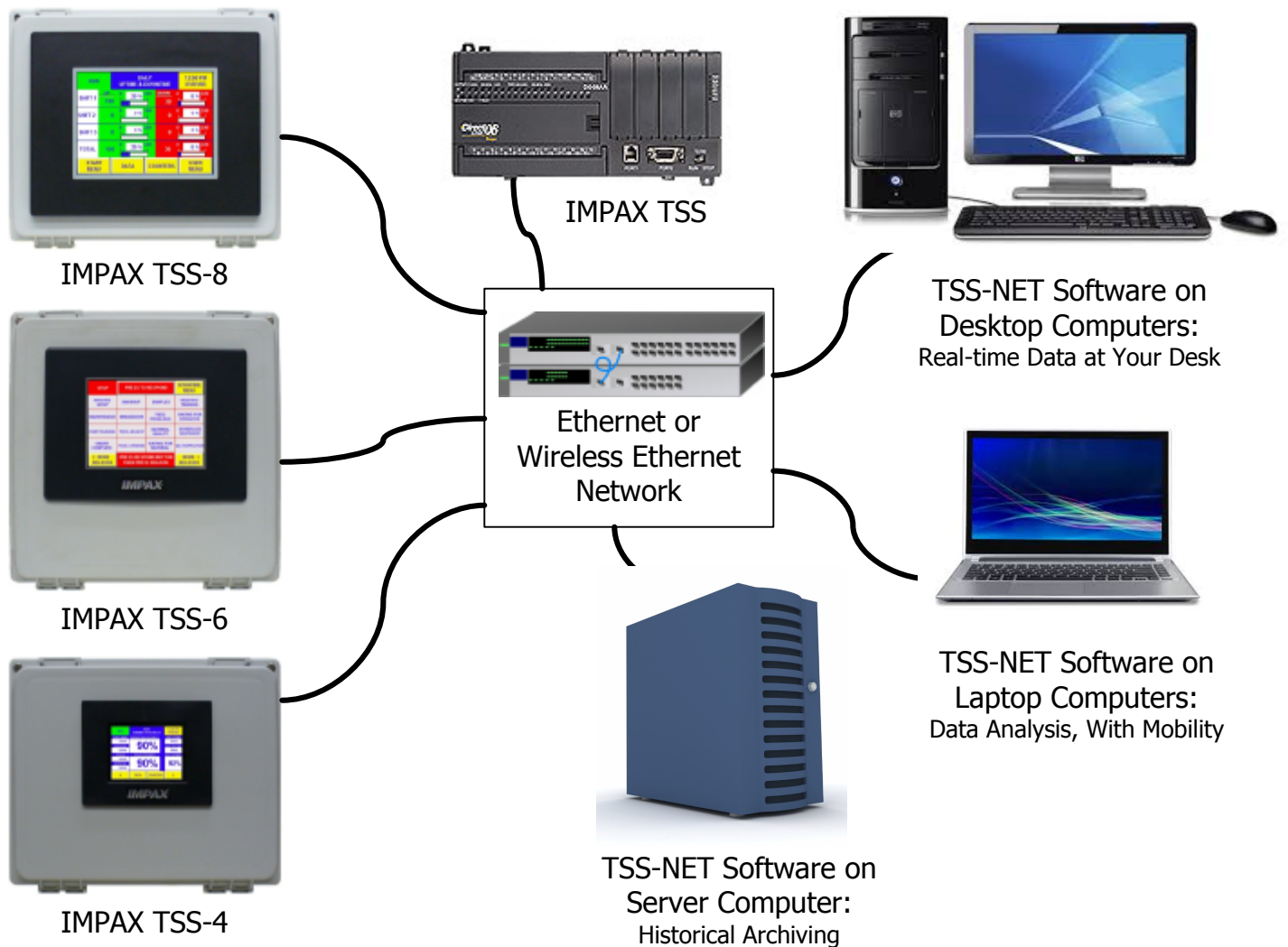
Alternatively, users can import the saved data files into any database/reporting program. The user then has total flexibility to do further analysis and report writing.

If TSS data is kept on a file server or network drive, the data is also available to all users on the network.



IMPAX TSS Network Diagram

The IMPAX Time Saver System consists of shop-floor productivity monitors, connected by Ethernet to any desktop, laptop, or server running TSS-NET software. This diagram shows how the system provides real-time access to shop floor status, as well as historical reporting.



IMPAX Time Saver System and TSS-NET Software

The full potential of the Time Saver System monitors is available when they are networked with the TSS-NET software:

- IMPAX TSS monitors connect to a shop-floor network via Ethernet or wireless Ethernet
- TSS-NET's Excel-based viewer provides real-time view of shop status and efficiency
- TSS-NET server program archives historical data in file server or shared folder
- Any computer on the network can access live shop floor data, or report on saved data
- Data can also be sent to overhead display boards, in the shop or the office