Software Solutions

FOR THE TELECOMMUNICATIONS INDUSTRY

CTS QMS

FORCE MANAGEMENT STATISTICS
TRAFFIC OFFICE PERIODIC REPORTS
INFORMATION ON OPERATORS
OPERATOR STUDIES
NUMEROUS QMS MEASUREMENTS

With over 20 years of experience in the telecommunications industry, Computerised Business Systems, Inc. creates software solutions which are aimed at adding value to our customer's business through increased productivity, profitability, growth and competitive advantage.

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CBSI
COMPUTERISED
BUSINESS
SYSTEMS
INC.

CTS QMS

The CTS QMS system collects force management statistics for traffic offices and reports those statistics in a quarterly, hourly, or daily format.

QMS includes force management and traffic office periodic reports; information on operators; and operator studies. A few QMS measurements analyzed are: initial position seizures; recall position seizures; transfer position seizures; call-busy work volume; non-call work volume; idle time; average work time; averaged occupied position; %OCCUPANCY, call wait and answer time.

Quick and easy forecasting utilizes the moving average method to project required operator staffing positions based on historical information.

Advanced integrated configurations using our CTS Gateway Server, TCP/IP Network connectivity, X.25 connectivity and Telnet are available.

The Queue Management System (QMS) is the program CTS Pro uses to report on QFADS and QTADS information. The QMS system uses 15-minute reports generated by QFADS/QTADS.

CBSI provides excellent technical support for the CTS QMS, which is included with the purchase of the system.

FEATURES AND BENEFITS

CTS QMS provides rapid access to well-formatted, easy-to-use graphs and reports.

- **Operator Workforce Line Graph** displays AOP and Required Positions in an 8-hr. period with 15-min. intervals at the system and TEAM levels.
- **%Occupancy Line Graph** shows percent occupancy in an 8-hr. period with 15-min. intervals at the system or TEAM levels.
- **Average Speed of Answer Line Graph** presents ANS in an 8-hr. period with 15-min. intervals for all queues.
- **Average Work Time Line Graph** displays AWT in an 8-hr. period with 15-min. intervals at the system, TEAM, or queue levels.
- **Position Seizures Line Graph** contains IPS, RPS, TPS and the sum of these seizures in an 8-hr. period with 15-min. intervals at the system, TEAM, and queue levels.
- **Work Volumes Line Graph** shows CBWV, NCWV, IDLT and their sum in an 8-hr. period with 15-min. intervals at the system and TEAM levels.
- **QMS Quarterly Reports** (T-5100 / T-5110) print QMS information in a 15-minute format. This report will look very similar to QMS data coming from the switch.
- **QMS Half-Hourly Reports** (T-5200/T-5210) presents the 15-minute QFD/QTAD information in a half-hourly total format.
- **QMS Hourly Reports** (T-5300/T-5310) compile the 15-minute QFAD/QTAD information into an hourly total format.
- **QMS Daily Reports** (T-5400/T-5410) allow you to view QFAD/QTAD information in a daily total format.
- **QMS Team Summary Report** (T-5420) will print 6-hour, 12-hour, 18-hour and 24-hour totals for QFAD/QTAD information as well as display quarterly system information.
- **QMS Force Management Schedule Summary** (T-5430) displays required operator positions based on the Force Capacity Table.
- **Forecasts** future operator staffing requirements using historical information.
- **Supervisor Desktop**

Supervisor Desktop provides real-time, light-up, color-coded windows for:

- Operators engaged online
- Operator statistics
- Time and Charges

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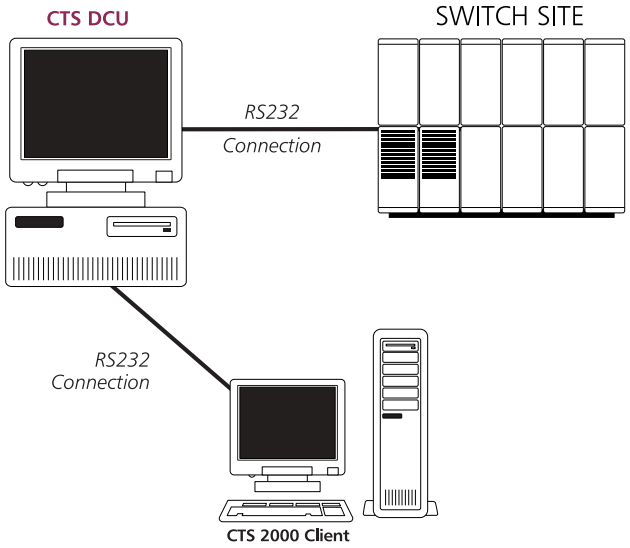
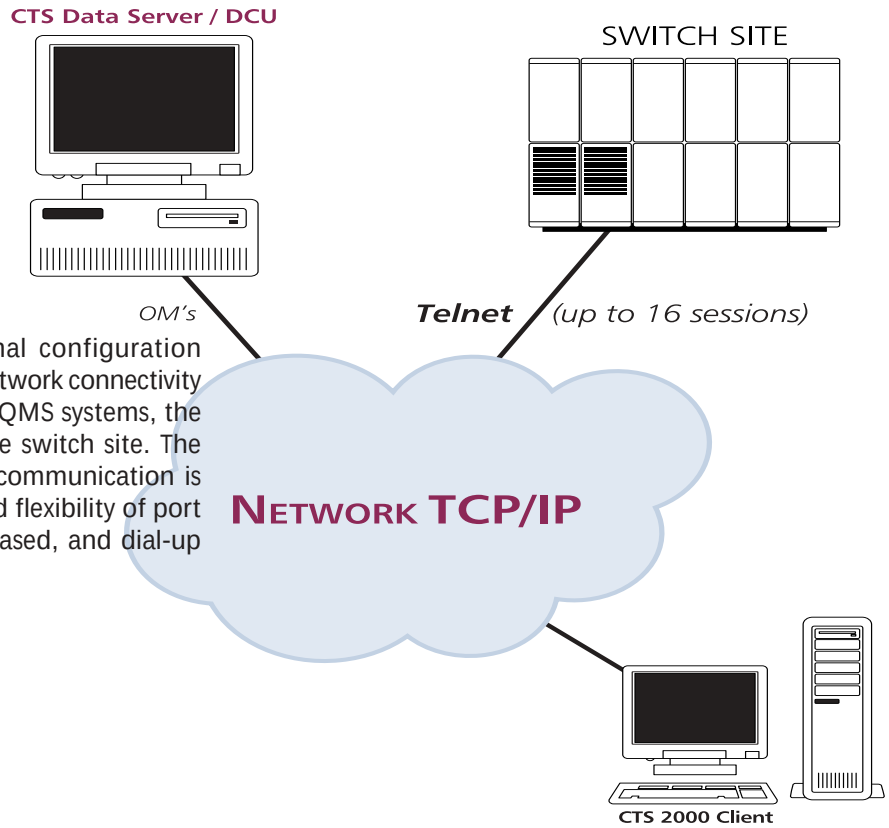
POSSIBLE CONFIGURATIONS FOR CTS QMS SYSTEMS

Using CTS 2000 modules, a vitually limitless number of sessions is achievable. Please call for free consulting services to design a specific configuration for your operations.



This basic operational configuration integrates the CTS 2000/CTS QMS systems with the CTS Gateway/ DCU which connects directly with your switch site. Simple RS232 cable provides an immediate link and eliminates costly dial-up charges. The integration will increase the speed of data retrieval and maximize the reliability of the data capture. Users are able to create faster and more accurate graphs and reports at their own convenience.



This integrated operational configuration utilizes Telnet and TCP/IP Network connectivity to link the CTS 2000 / CTS QMS systems, the CTS Gateway/DCU, and the switch site. The speed of connection and communication is enhanced, the capacity and flexibility of port usage is dramatically increased, and dial-up costs are eliminated.

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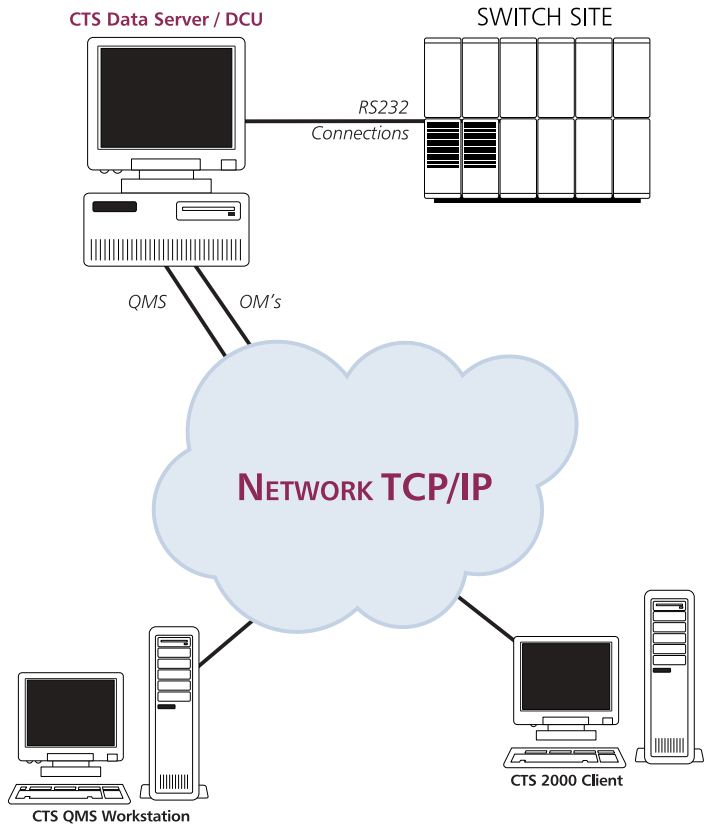
POSSIBLE CONFIGURATIONS FOR CTS QMS SYSTEMS (CONT.)

Using CTS 2000 modules, a vitually limitless number of sessions is achievable. Please call for free consulting services to design a specific configuration for your operations.



This integrated operational configuration uses TCP/IP Network connectivity to join two workstations with the CTS Gateway/DCU and one switch site. The CTS Gateway/DCU is linked to the switch with a RS232 cable and/or X.25 protocol, which provides quick and reliable communication while eliminating dial-up charges. QMS and OM data is transmitted to the two workstations via the TCP/IP Network.

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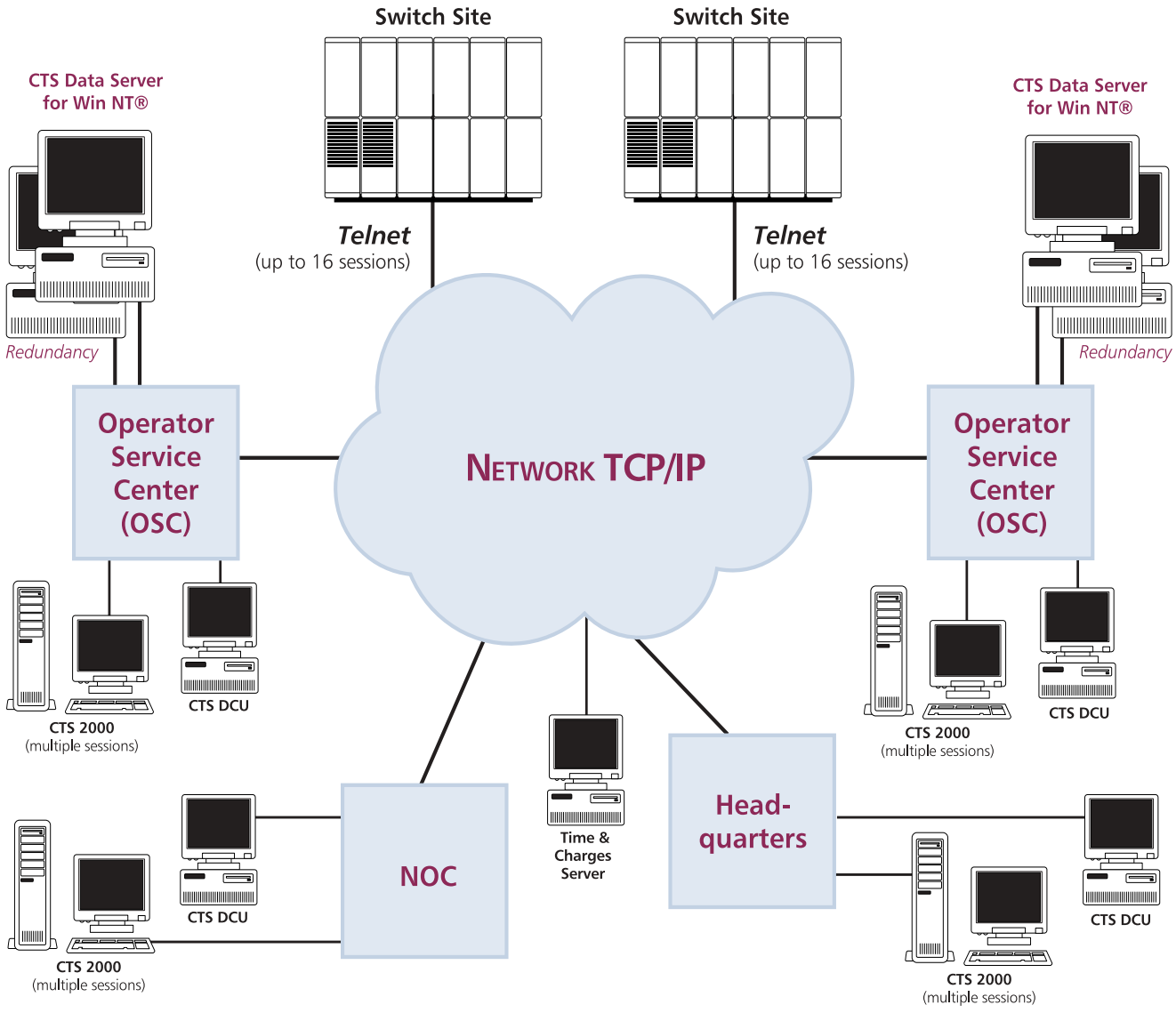
POSSIBLE CONFIGURATIONS FOR CTS QMS SYSTEMS (CONT.)

Using CTS 2000 modules, a vitally limitless number of sessions is achievable. Please call for free consulting services to design a specific configuration for your operations.



This integrated operational configuration links two switch sites, two operator service centers (OSC), a network operation center (NOC), and a headquarter office. A fail-safe redundancy application is featured as well. Data is stored and saved in two units. If one should fail, the other unit takes over providing disaster recovery. TCP/IP Network connectivity and Telnet dramatically increase the capacity and flexibility of port usage and eliminate dial-up charges. The integration of the CTS 2000 / CTS QMS and the CTS DCUs enhance the speed and reliability of the data capture, and allow the users to create faster and more accurate graphs and reports at their own convenience. Some configurations may require a CTS Gateway.

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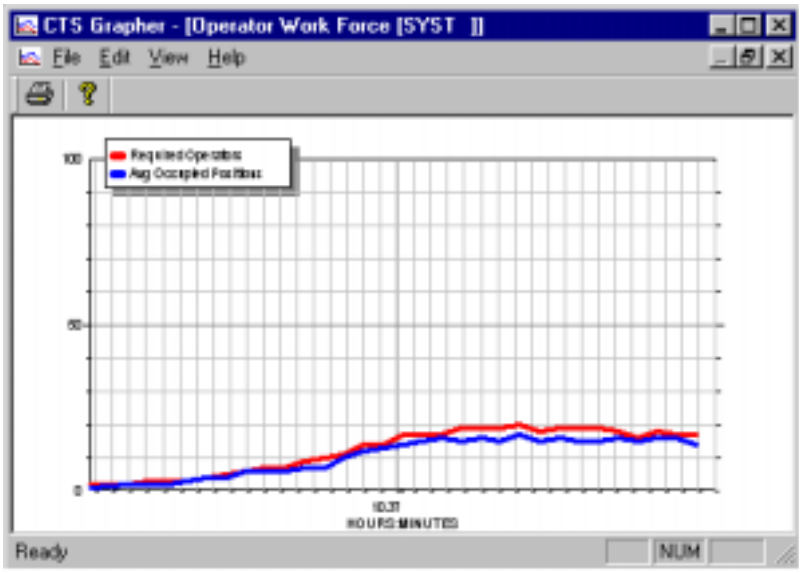
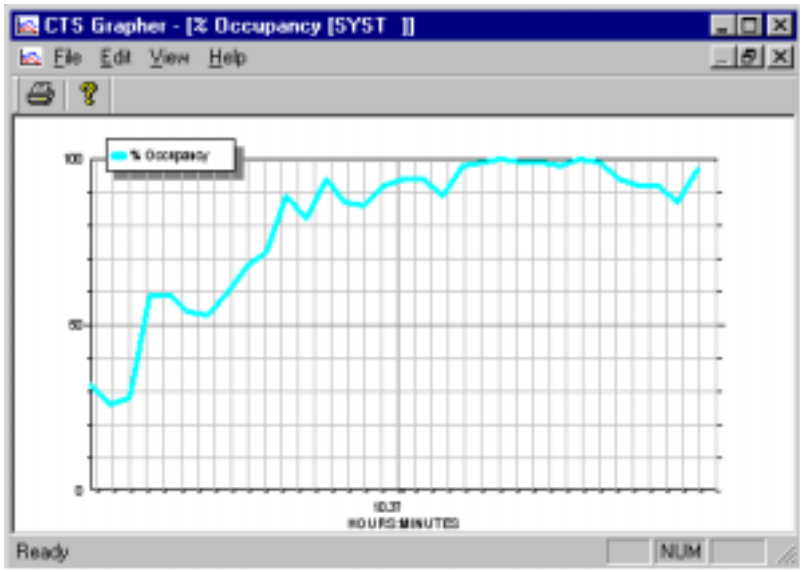
SAMPLE GRAPHS OF CTS QMS DATA

OPERATOR WORKFORCE

This is a line graph containing **AOP** (average occupied positions) and **Required Positions**. The current 8-hour period is displayed with volumes plotted at 15-minute intervals. The line moves in real time with the median hour and minutes presented in the middle of the X axis. This graph is available at the System and TEAM levels. Default screen 1.



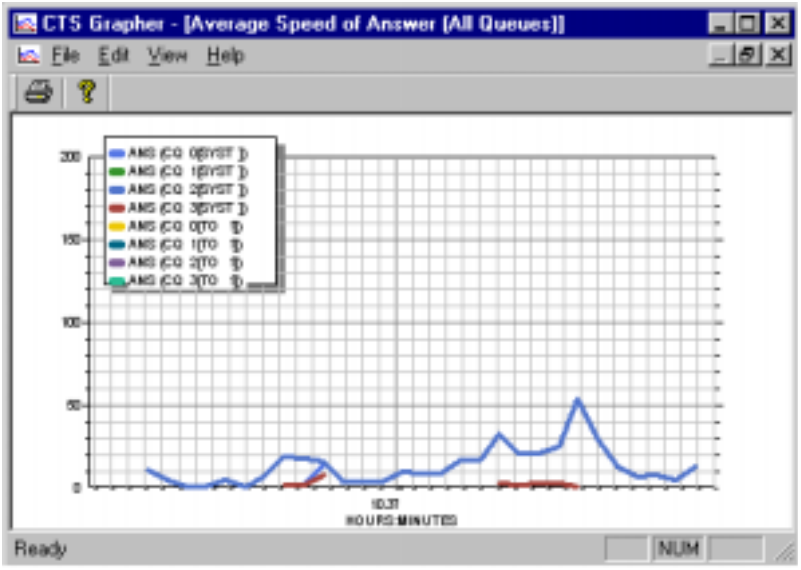


% OCCUPANCY SYSTEM LEVEL

This is a line graph containing **% OCC** (percent occupancy) on the system level. The current 8-hour period is displayed with the volume plotted at a 15-minute interval. The line moves in real time with the median hour and minutes presented in the middle of the X axis. Default screen 2.

AVERAGE SPEED OF ANSWER

This is a line graph containing **ANS** (average speed of answer) for all queues. The current 8-hour period is displayed with the volumes plotted at 15-minute intervals. The line moves in real time with the median hour and minutes presented in the middle of the X axis. Default screen 3.



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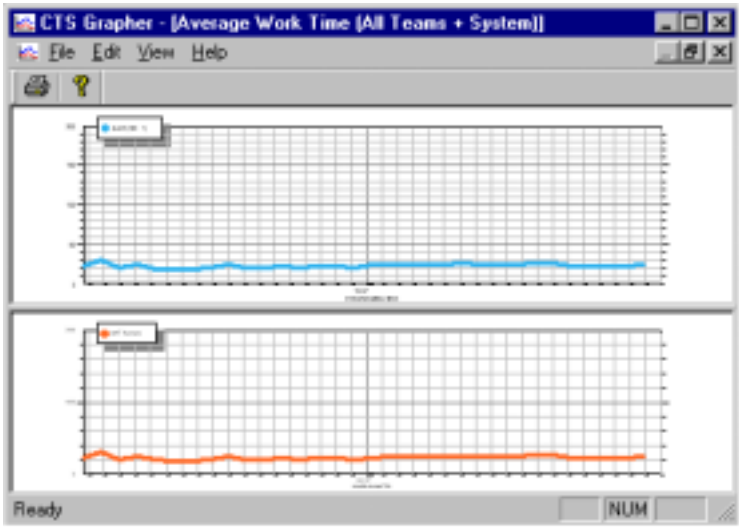
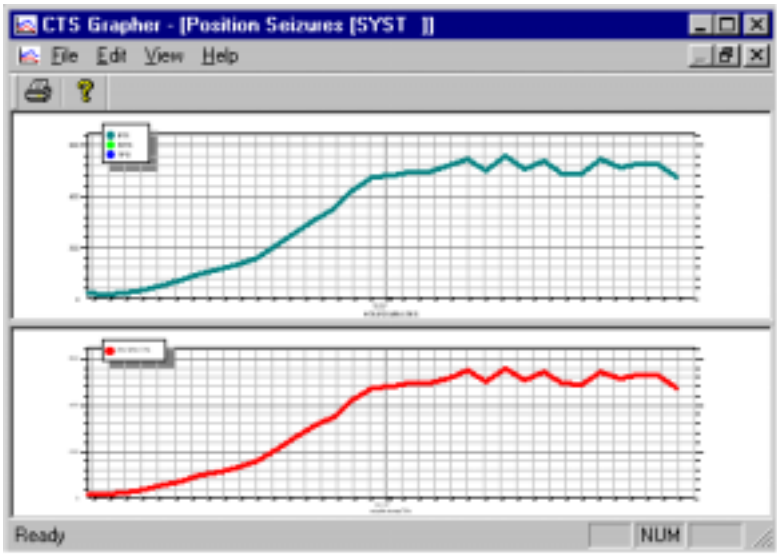
SAMPLE GRAPHS OF CTS QMS DATA

AVERAGE WORK TIME

This is a line graph containing **AWT** (average work time). The current 8-hour period is displayed with the volume plotted at 15-minute intervals. The line moves in real time with the median hour and minutes presented in the middle of the X axis. This graph is available at the System and TEAM level. Default screen 4.



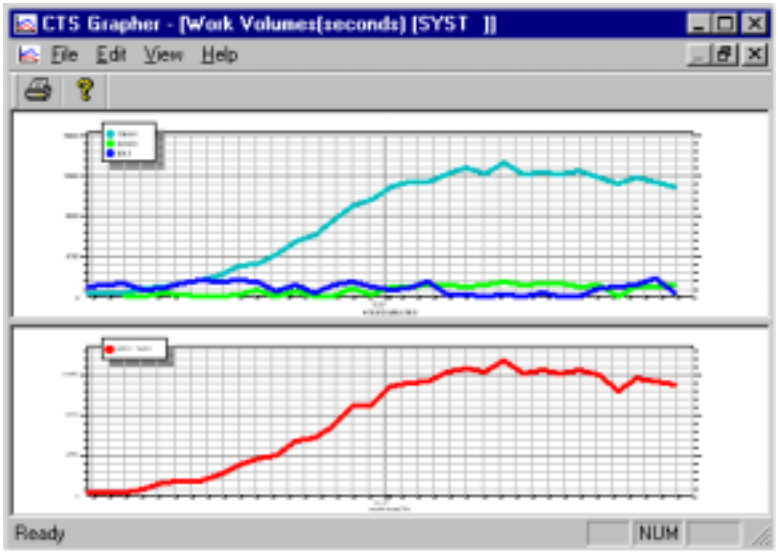


POSITION SEIZURES

This is a line graph containing **IPS** (initial position seizures), **RPS** (recall position seizures), **TPS** (transfer position seizures), and the sum of the above. The current 8-hr. period is displayed with the volumes plotted at 15-min. intervals. The line moves in real time with the median hour and minutes presented in the middle of the X axis. This graph is available at the System, TEAM, and Queue levels.

WORK VOLUMES

This is a line graph containing **CBWV** (call- busy work volume), **NCWV** (non-call work volume), **IDLT** (idle time), and the sum of the above. The current 8-hr. period is displayed with volumes plotted at 15-minute intervals. The line moves in real time with the median hour and minutes presented in the middle of the X axis. This graph is available at the System and TEAM levels.



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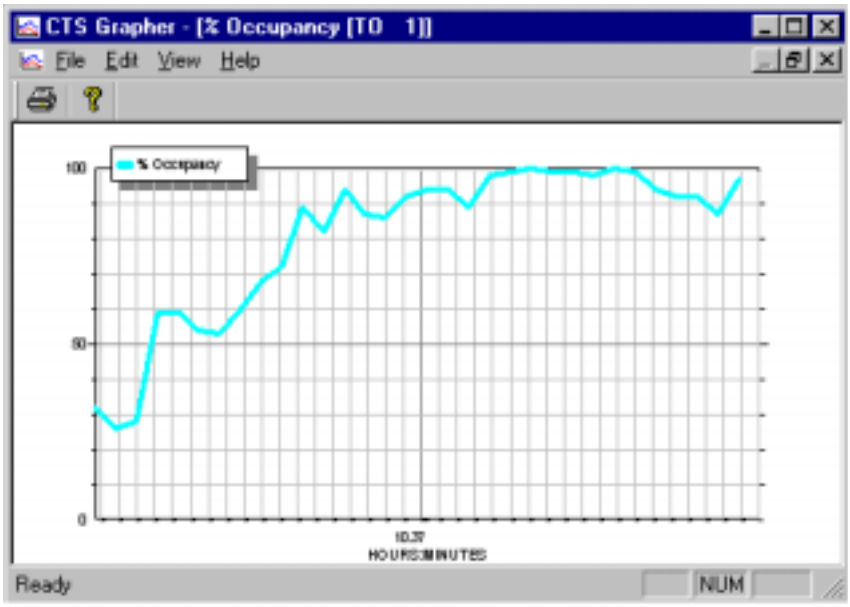
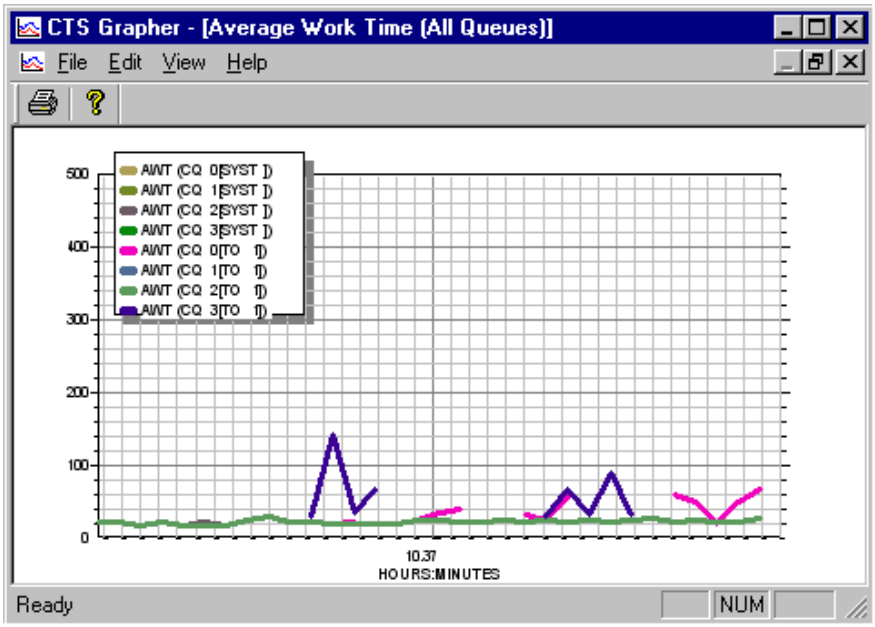
SAMPLE GRAPHS OF CTS QMS DATA



% OCCUPANCY TEAM LEVEL

This is a line graph containing **% OCC** (percent occupancy) on the team level. The current 8-hour period is displayed with the volume plotted at a 15-minute interval. The line moves in real time with the median hour and minutes presented in the middle of the X axis.



AVERAGE WORK TIME QUEUES

This is a line graph containing **AWT** (average work time) for each queue. The current 8-hour period is displayed with volumes plotted at 15-minute intervals. The line moves in real time with the median hour and minutes presented in the middle of the X axis.

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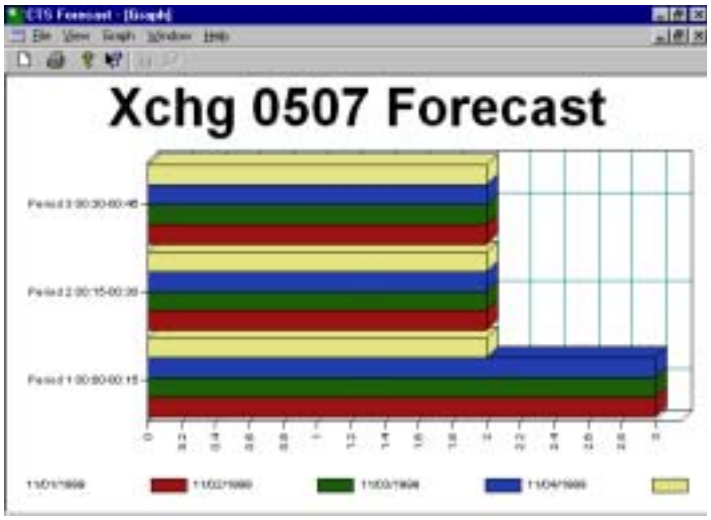
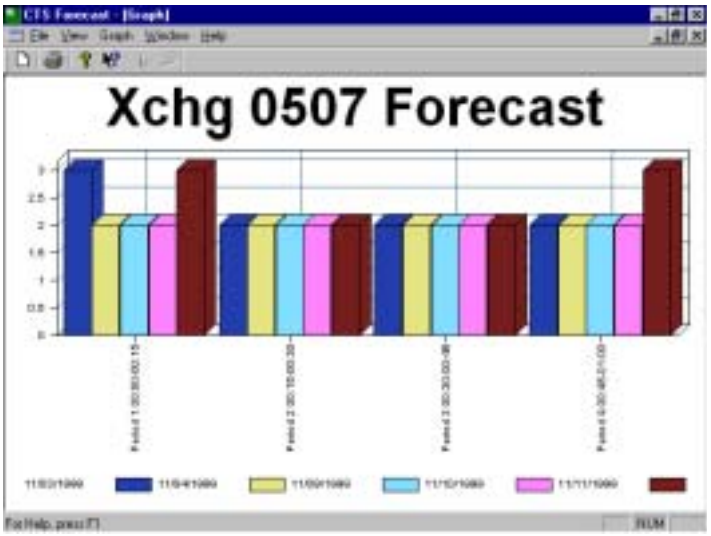
SAMPLE FORECAST GRAPHS OF CTS QMS DATA



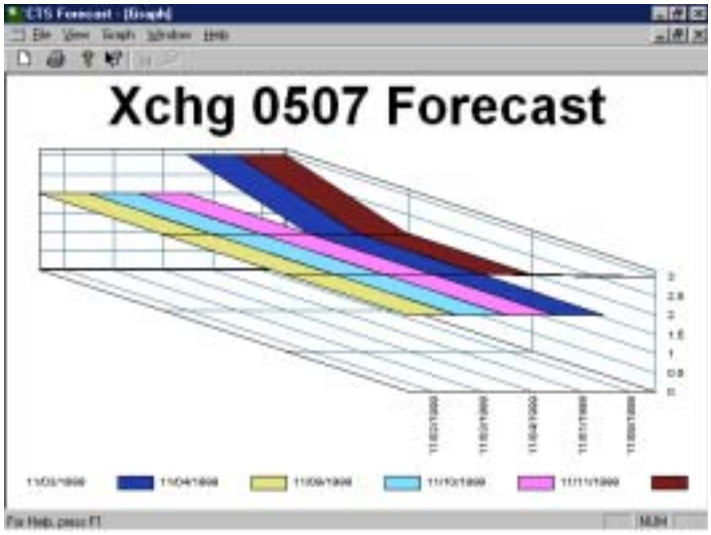
3D Horizontal Bars

This is a 3D horizontal bar graph containing 4 time periods on 5 different days. Each colored bar shows the projected number of force management positions needed for that particular day in that particular time period.



3D Vertical Bars

This is a 3D vertical bar graph containing 4 time periods on 5 different days. Each colored bar shows the projected number of force management positions needed for that particular day in that particular time period.



Ribbon Chart

This is a ribbon chart containing 4 time periods on 5 different days. Each colored ribbon shows the projected number of force management positions needed for that particular day in that particular time period.

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