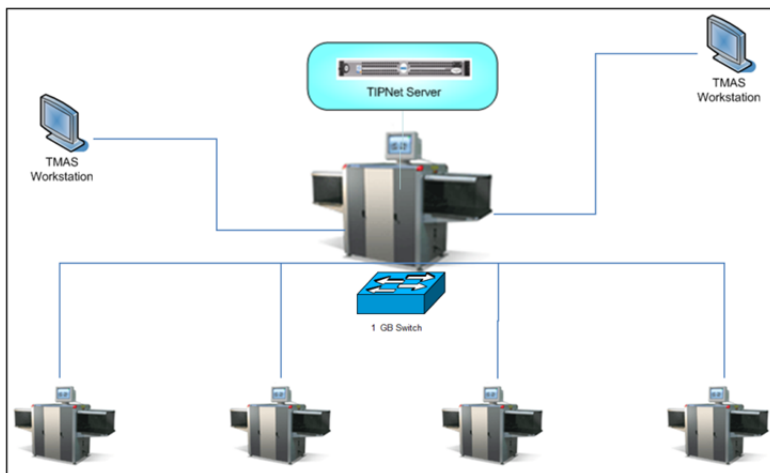


Rapiscan[®]
systems

An OSI Systems Company

Threat Image Projection Network

TIPNet™



Threat Image Projection Network (TIPNet™)

Threat Image Projection (TIP) software allows computer-generated threat images to be digitally inserted into the image of an item being scanned. Supervisors can then monitor the operator's response and take corrective actions as needed in cases where the operator fails the test. TIP is used for training aimed at the continuous improvement of operator performance. It also provides performance monitoring and management reporting.

The X-ray systems running standalone TIP can log individual operator's results and generate reports if required. However, when multiple machines are networked together, the TIP software and the TIP management software can provide comprehensive reporting across the complete network.

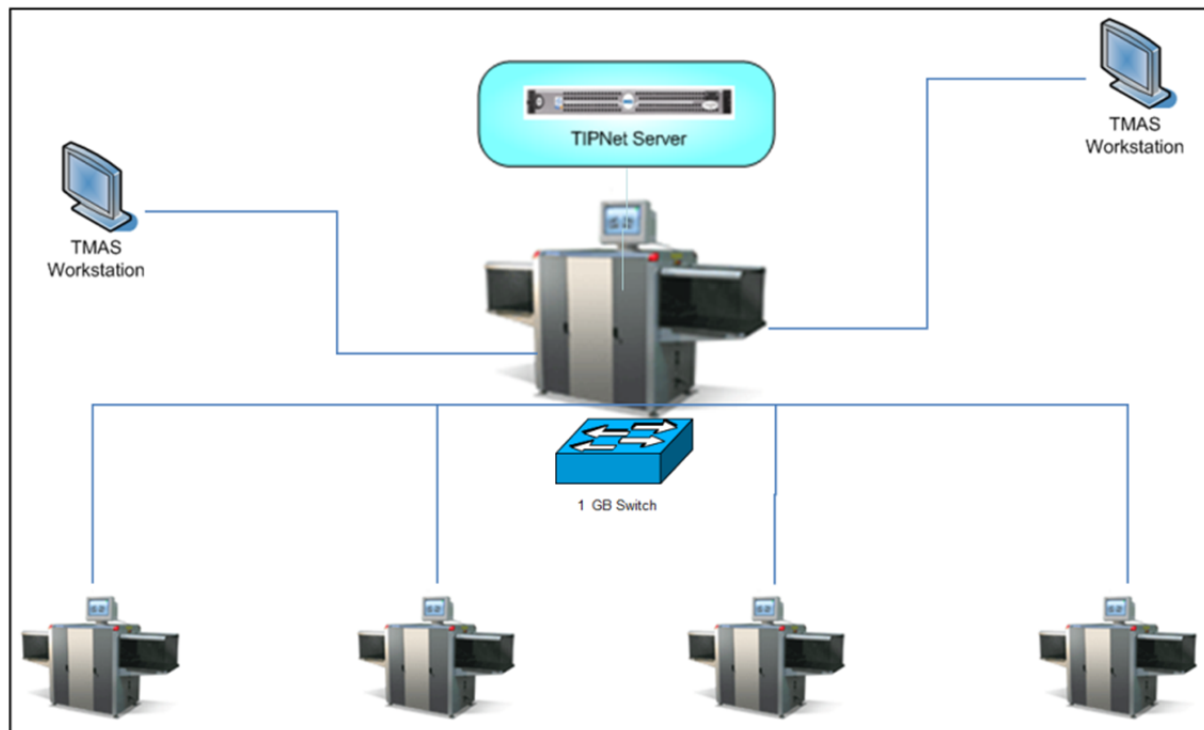


Figure 1- A typical TIPNet configuration

With continual development of our products Rapiscan Systems reserves the right to amend specifications without notice. Product pictures are for general reference. Please note that due to US laws and regulations, not all Rapiscan products are available for sale in all countries without restriction. Please contact your Rapiscan Systems sales representative for more information.

The implementation and use of Rapiscan TIPNet™ allows supervisors or managers to run TIP on multiple X-ray systems from one central network computer. TIPNet saves time by eliminating the need to configure each individual X-ray machine. By having a central point for reviewing TIP data and managing TIP settings, a customer can reduce costs while improving efficiency.

Each system and operator can be configured with its own profile. Thus, TIPNet provides feature-rich supervisory controls and reporting functions to continually improve the performance of large checkpoint screening installations. X-ray machines receive TIP settings from the server in real-time; therefore, changes are made globally throughout the network. Data generated by the X-ray systems is also reported to the central database in real-time.

The X-ray machine software also has built-in network redundancy. Therefore, if the network connection is broken, the X-ray software continues to operate TIP in standalone mode without any affect to the screener. When the network connection has been re-established, the TIP data that has been recorded locally gets updated automatically to the server.

FEATURES

- Manage TIP Data across the complete network
- Centralized monitoring, reporting and configuration management of multiple TIP software installations
- Software-based feature compatible with all Rapiscan 6xx series X-ray systems
- Compliant with the ECAC TIP 2 requirements

BENEFITS

- Increase efficiency by simultaneous management of TIP libraries and configurations of multiple systems
- Easy maintenance of users and TIP features and configurations
- Instantaneous access to TIP data – reports, graphs and trends
- Download tip data from all x-ray machines from one location.

TIP Management Analysis Software (TMAS)

At the core of the TIPNet functionality is our proprietary TIP Management Analysis Software (TMAS). Operating in a TIPNet environment with friendly user controls and in-depth analysis of screeners' TIP data, TMAS is a complete TIP data management tool providing a simple, robust and functional reporting interface.

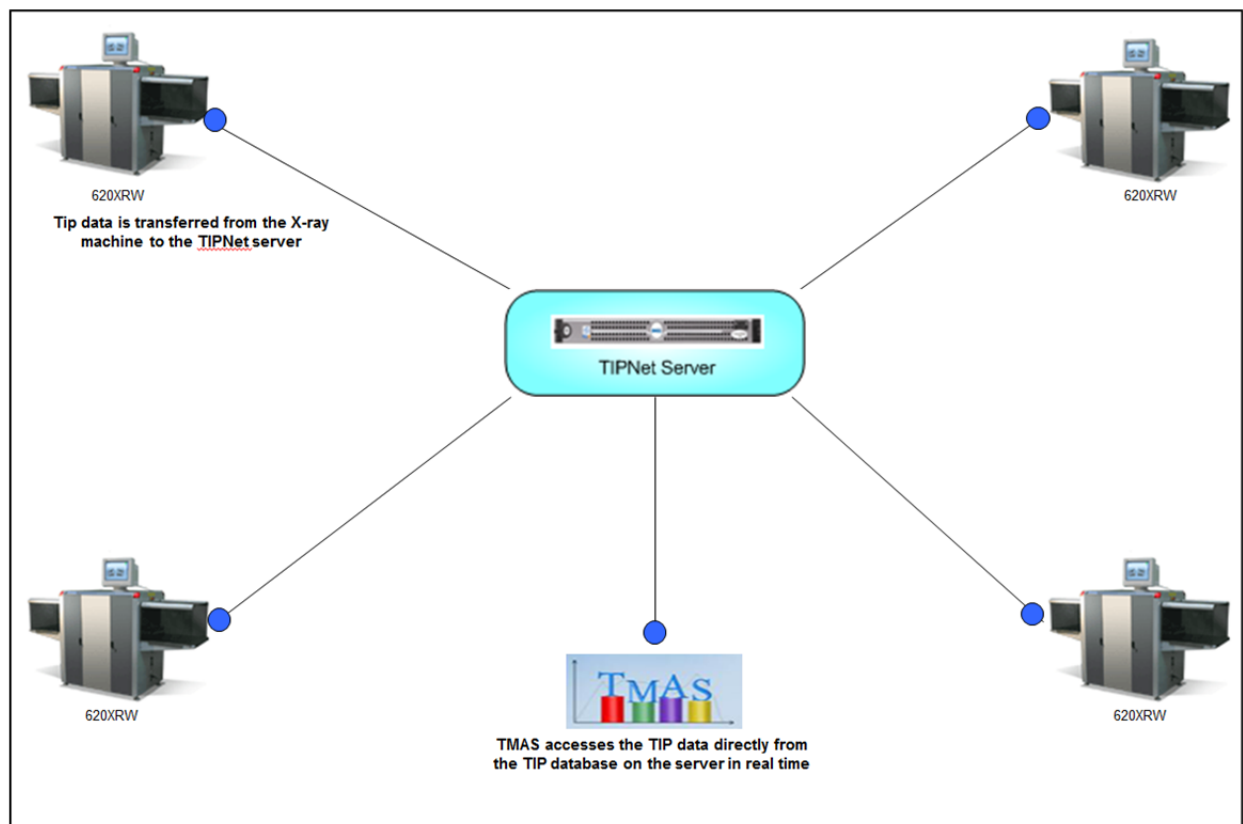


Figure 2 - TMAS provides the core tools for supervisory oversight

The TMAS system uses a comprehensive suite of software tools designed for ease-of-use and easy navigation. Historical data is accessed with a few simple clicks. Missed images can also be viewed, and each view can be customized to the customer's and supervisor's preferences. Pre-defined date options include Last Full Calendar Month, Last Full Calendar Year, and Screener History. When a criterion is selected or modified it gets updated automatically across all Overviews.

Supervisors have the option of enlarging graphs, and all overviews and graphs can be printed. TMAS has been designed to be compliant with ECAC TIP-2 requirements.

The following sections describe each overview tool.





Individual Screener Performance Overview

TMAS also allows the individual Screener/Operators Performance to be viewed and analyzed, as shown in Figure 3. All data related to an individual screener can be viewed to assess performance. Pre-defined views include:

- Monthly Breakdown of the Percentage of Hit and Missed TIP's
- Monthly Breakdown of the Percentage of Hit and Missed TIP's per Category
- Overview of the Percentage of Hits and Misses
- Photo of Screener
- Date the Screener was activated
- Total Number of TIP's
- Total Number of Bags
- Overall Competency Result
- Machine Usage Indicator

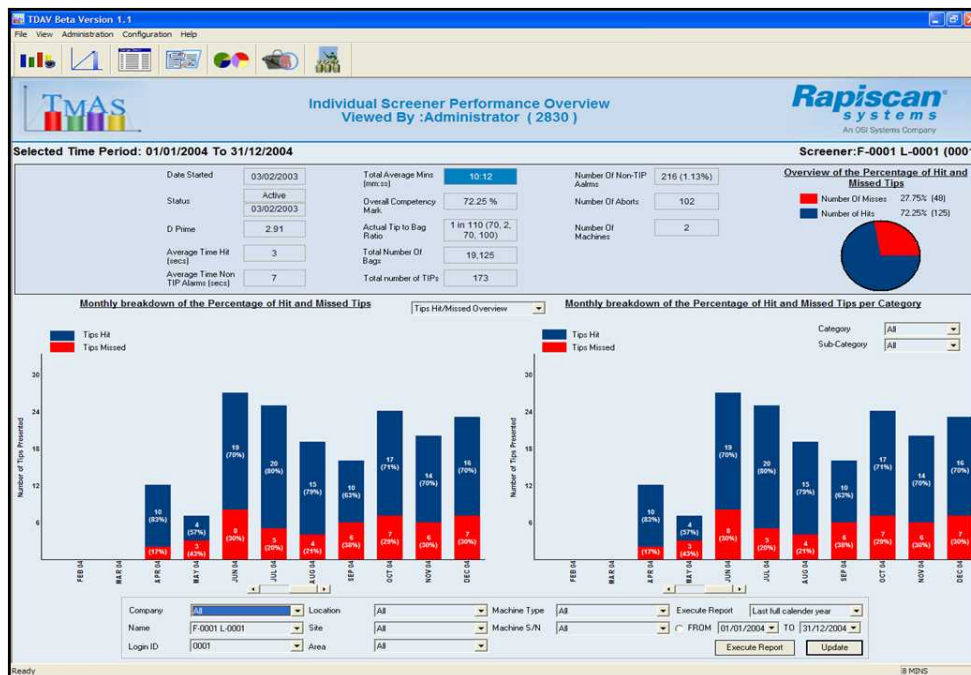


Figure 3 - A sample view of a screener's performance

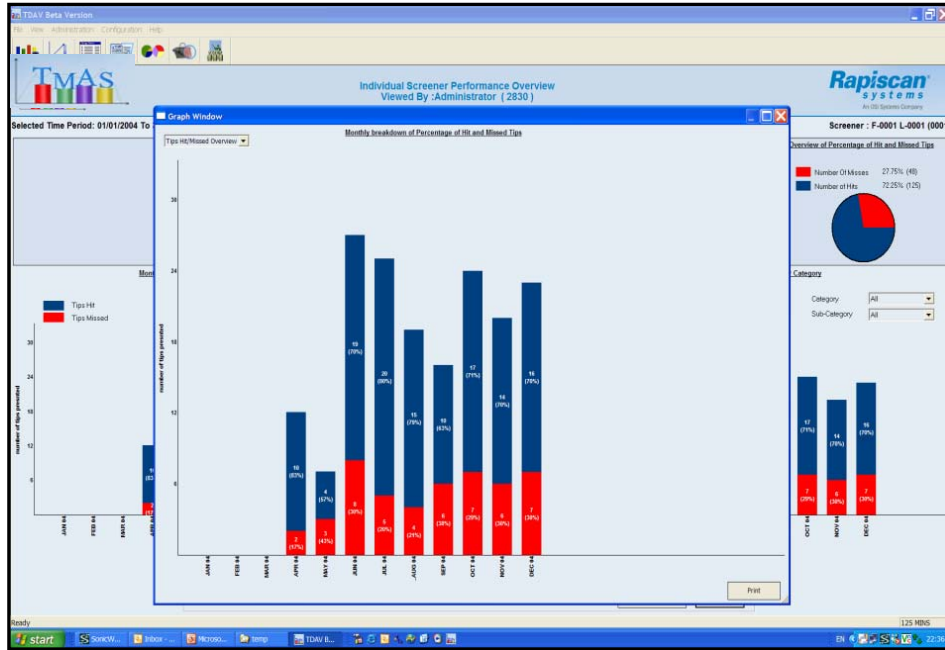
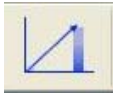


Figure 4 - Graphs can be enlarged with a simple double-click



High Level Overview

The High Level Overview offers a summary of the checkpoint's TIP data for a selected time period. The overview consists of the following graphs and provides details on:

- *Monthly Breakdown of the Percentage of Hit and Missed TIP's*
- *Overall Presentation of TIP's per Category*
- The number of machines used for the selected criteria
- The total number of TIP's
- Number of shifts worked
- Overall competency result

The *Monthly Breakdown of the Percentage of Hit and Missed Tips* graph shown in Figure 5 offers the user the ability to compare the number of TIPs presented with the screener's detection rate. This offers the supervisor a comparison of TIP's Hit (%) against the number of TIPs presented.



Figure 5 - An individual screener's performance can be quickly and graphically summarized

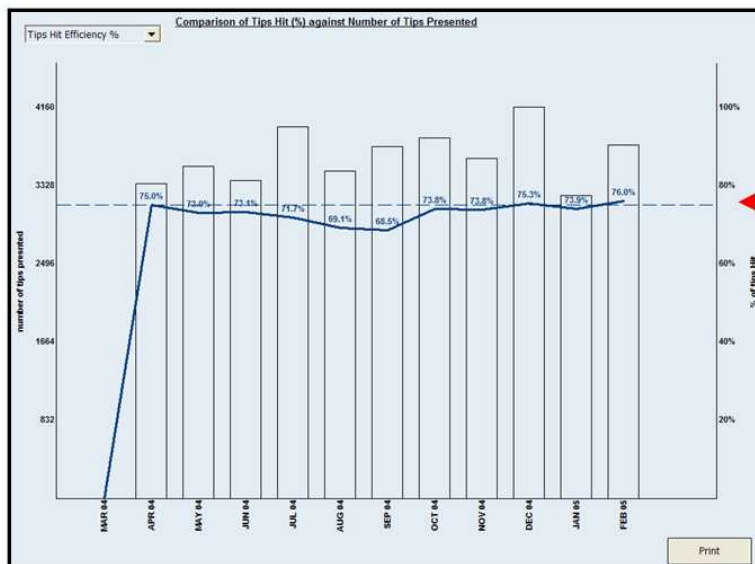


Figure 6 - A screener's competency scores can viewed historically to determine consistency



Screener Log Overview

The Screener Log Overview offers a graphical snapshot of a screener's log - in \ log - out history. The software will inform the user whether the checkpoint as a whole and/or individual screeners are complying with required time allocated for a screener's shift on the X-ray machine. The software allows the user to specify the required shift duration. Based on this, the software will indicate whether the checkpoint or individual screener is within time, over time or under time.

The *Comparison of Machine Usage* graph enables the user to compare the usage times of each X-ray machine. By double-clicking on any of the graphs, the software will drill down to the *Monthly Screener Log Report*. The user can then subsequently drill down to the *Individual Screener Log Report* to analyse each screener's log - in / log - out times for the selected time period.

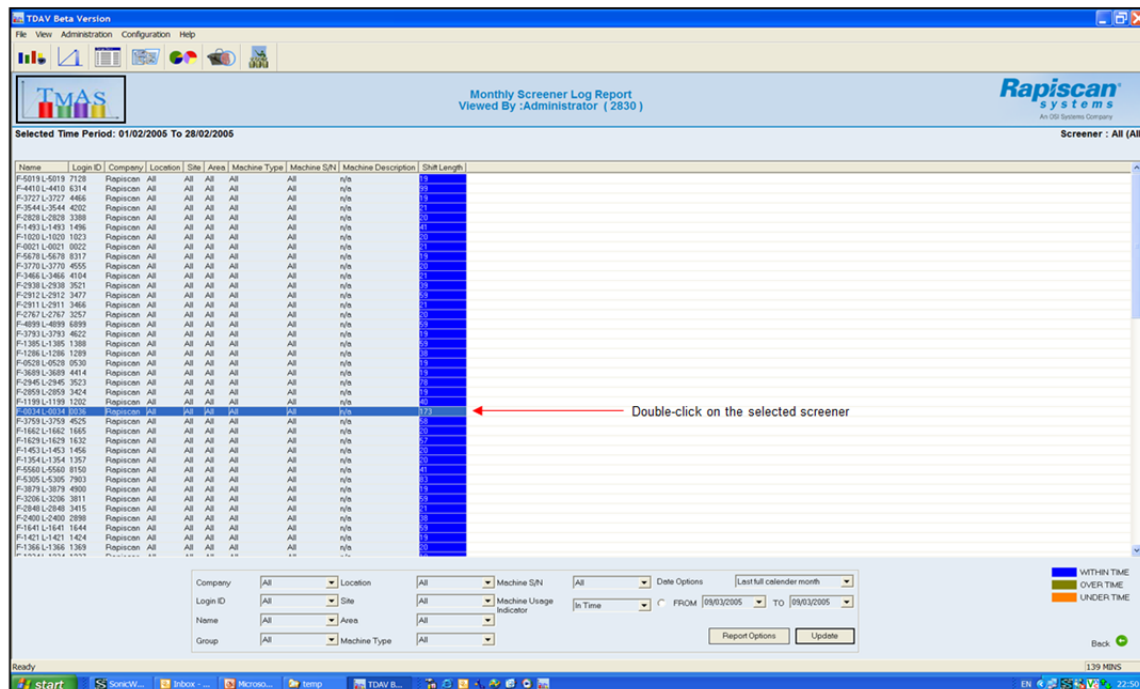


Figure 7 - drill-down to specific details by simply double-clicking

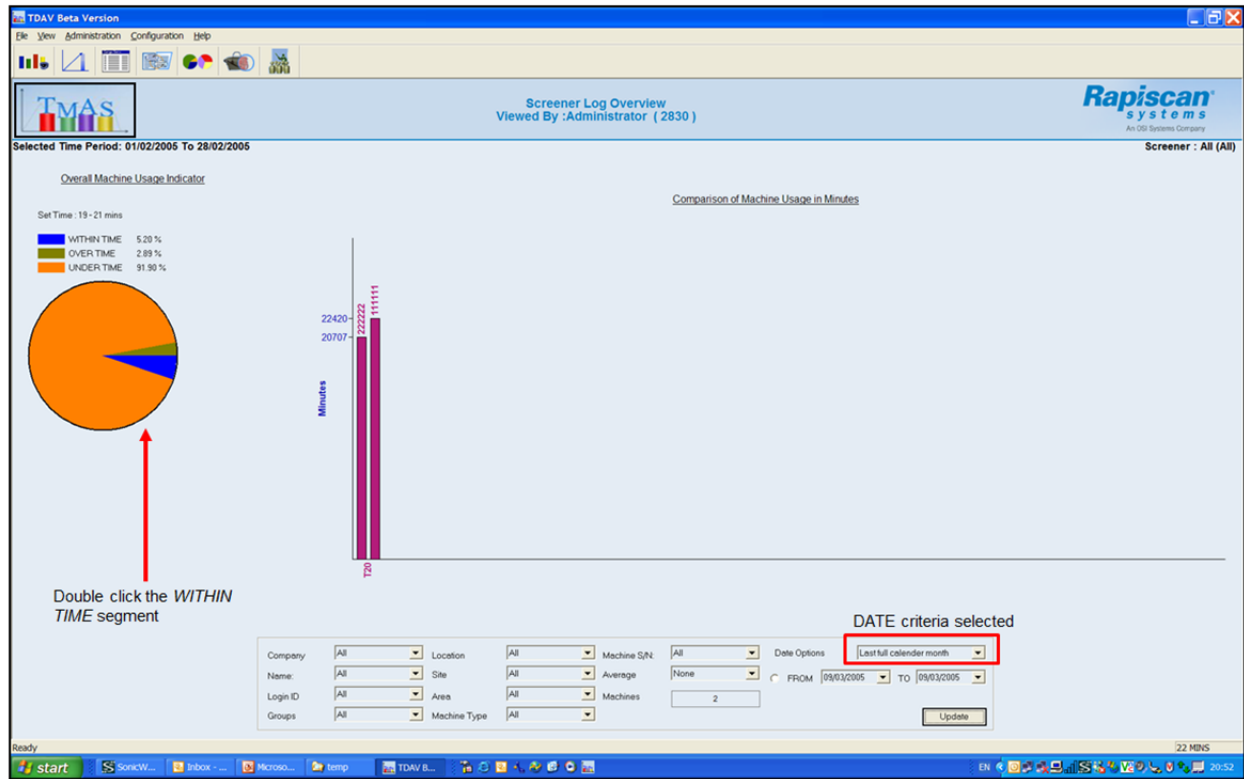


Figure 8 - Double-click again to drill down to further detail



TIP Data Comparison Overview

The *TIP Data Comparison Overview* offers a comparison of TIP data across multiple criteria. TIP Data can be compared and viewed in a tabled or graphical format. In the tabled format, data columns can be hidden to only show TIP data that is relevant to that particular search. Search criteria can be saved to allow quick access to data in the future.

The TIP Data Comparison Graphical Report displays two graphs:

- *Comparison of the Percentage of Hit and Missed Tips*
- *Comparison of the Total Number of Bags and Non – Tip Alarms*

This allows for comparison between the overall checkpoint, specific screening areas, individual screeners, specific machines, and customer-defined screener groups.

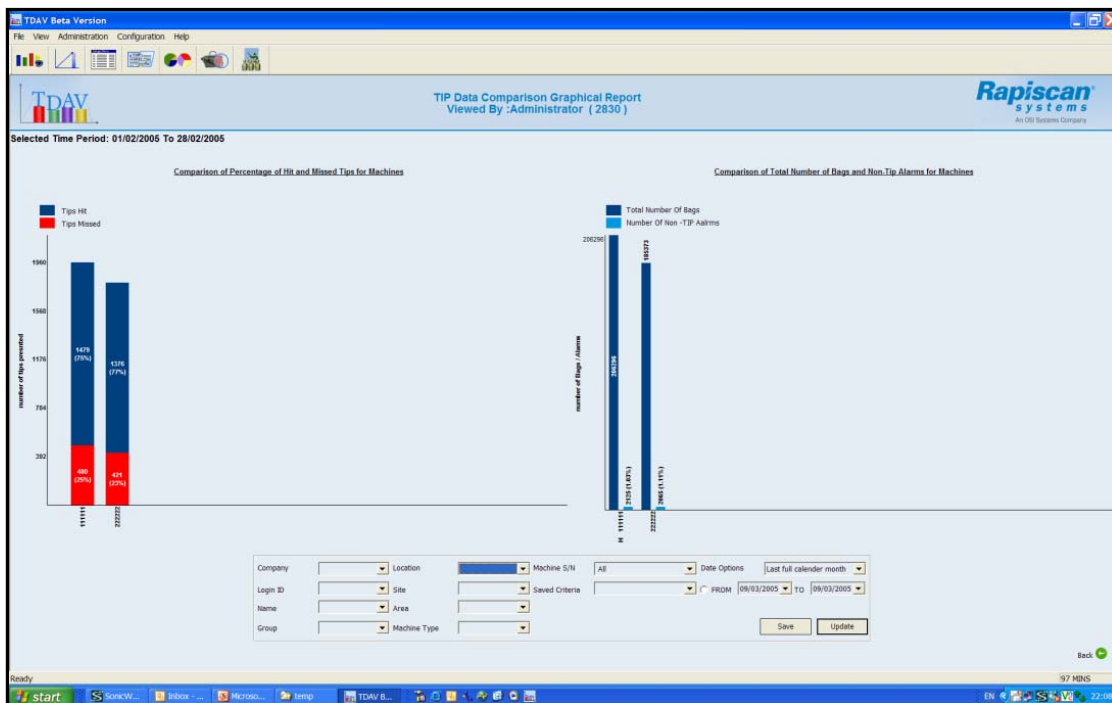


Figure 9 - Comparison of the Total Number of Bags and Non – Tip Alarms



Screener Competency Overview

The *Screener Competency Overview* offers a summary of the screener's Performance in the form of a PASS or FAIL result.

The results are displayed in a tabled format containing:

- Name of screener
- Number of bags presented
- Number of TIPs presented
- TIP competency score (%)
- PASS, FAIL or INSUFFICIENT DATA result

The minimum number of TIPs that need to be presented to a screener before the software can calculate the screener's competency result can be set within TMAS allowing a consistent approach to screener evaluation. The competency PASS level (%) can also be set within TMAS.

All columns can have their relevant information sorted. For example, you can sort the highest TIP score to the lowest and vice-versa. The user can double-click on a screener and be presented with the following graphs:

- *The Overall Presentation of Tips per Category*
- *The Overall Presentation of Hits per Category*
- *The Overall Presentation of Misses per Category*
- *Screener Competency Yearly Graph*

Through the yearly graph, the screener's competency results are broken down into monthly periods.

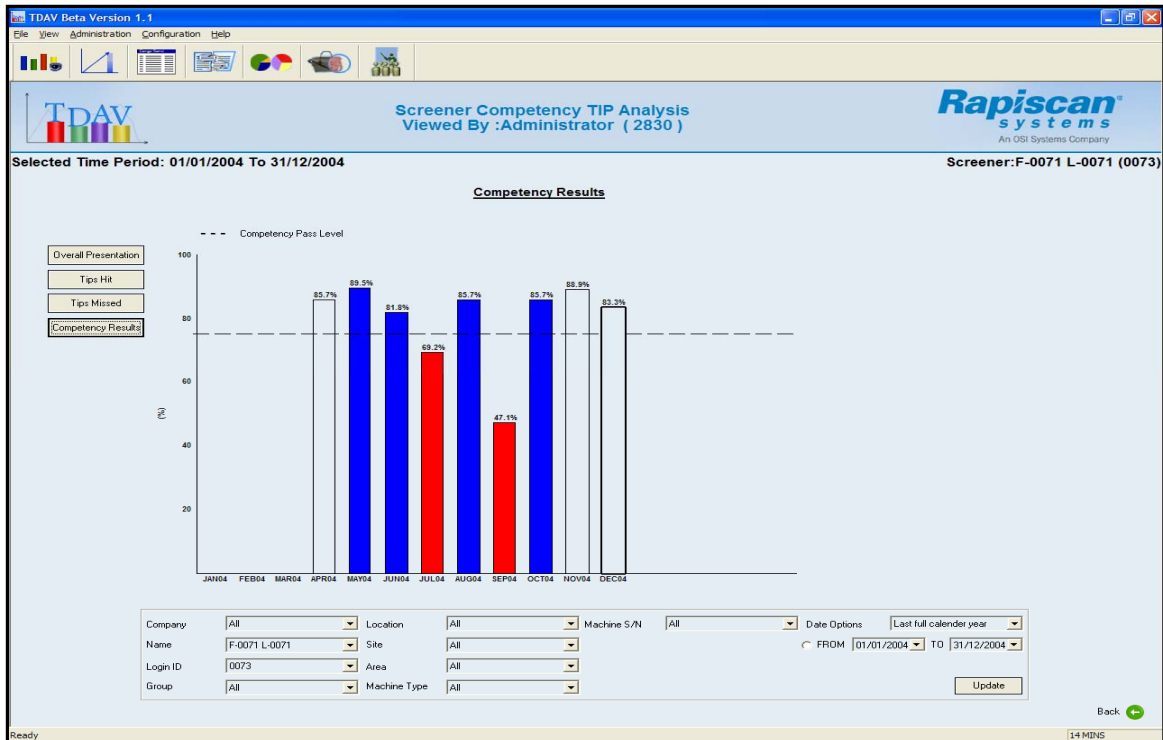


Figure 10 - Viewing competency historically helps to assess consistency of performance



Threat Detection by Category Overview

The *Threat Detection by Category Overview* offers a detailed review of all TIPs presented for the selected time period.

- The TIP data is displayed in a tabled format (Figure 11).
- In the tabled format, data columns can be hidden to only show TIP data that is relevant to that particular search.
- By double-clicking on a result, the software will offer a pop up window displaying information about the TIP (Figure 12).
- When a MISS result is double-clicked, the software will offer two options: To view the TIP information or review the missed TIP image via the TIP Training and Feedback module (Figure 13)

Name	Login ID	Company	Location	Site	Area	Machine Type	Machine S/N	Machine Description	Event Date	Configuration Time	Threat Category	Threat Sub-Category	Threat File	Result	Response Time	Download
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	10/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B053C.FTI	MISS	0	View Tip Alarm	5	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	10/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B013A.FTI	ABORT	0	View Tip Alarm	5	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	12/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B053C.FTI	ABORT	0	View Tip Alarm	5	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	12/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B053C.FTI	ABORT	0	View Tip Alarm	5	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	12/01/2005 02/11/2004 23:40:39	Knife	Conventional	TN2K013B.FTI	HIT	3	View Tip Alarm	23	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	12/01/2005 02/11/2004 23:40:39	Knife	Conventional	TN2K013B.FTI	HIT	3	View Tip Alarm	1	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	12/01/2005 02/11/2004 23:40:39	Knife	Conventional	TN2K013B.FTI	HIT	3	View Tip Alarm	1	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	12/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B013C.FTI	HIT	3	View Tip Alarm	3	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	15/01/2005 02/11/2004 23:40:39	Knife	Conventional	TN2K013A.FTI	MISS	0	View Tip Alarm	3	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	15/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B036A.FTI	HIT	6	View Tip Alarm	6	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	15/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B013C.FTI	MISS	0	View Tip Alarm	5	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	16/01/2005 02/11/2004 23:40:39	Gun	Conventional	TN2G023B.FTI	HIT	2	View Tip Alarm	2	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	16/01/2005 02/11/2004 23:40:39	Knife	Conventional	TN2K014B.FTI	HIT	3	View Tip Alarm	3	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	23/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B059B.FTI	MISS	0	View Tip Alarm	3	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	24/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B013A.FTI	ABORT	0	View Tip Alarm	3	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	24/01/2005 02/11/2004 23:40:39	Knife	Conventional	TN2K015A.FTI	HIT	3	View Tip Alarm	5	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	24/01/2005 02/11/2004 23:40:39	Gun	Conventional	TN2G023B.FTI	HIT	4	View Tip Alarm	4	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	24/01/2005 02/11/2004 23:40:39	Gun	Conventional	TN2G013B.FTI	HIT	3	View Tip Alarm	4	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	111111	--	30/01/2005 02/11/2004 23:40:39	Gun	Conventional	TN2G013B.FTI	HIT	3	View Tip Alarm	6	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	05/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B033A.FTI	ABORT	0	View Tip Alarm	6	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	05/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B036A.FTI	ABORT	0	View Tip Alarm	6	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	05/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B043A.FTI	MISS	0	View Tip Alarm	9	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	05/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B032B.FTI	ABORT	0	View Tip Alarm	9	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	17/01/2005 02/11/2004 23:40:39	Gun	Conventional	TN2G006B.FTI	HIT	2	View Tip Alarm	2	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	17/01/2005 02/11/2004 23:40:39	Gun	Conventional	TN2G006B.FTI	HIT	2	View Tip Alarm	2	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	23/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B047E.FTI	HIT	2	View Tip Alarm	3	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	23/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B009C.FTI	ABORT	0	View Tip Alarm	2	
F-0001-L-0001-0001	0001	Rapiscan	Houston	T20	Rap520	222222	--	23/01/2005 02/11/2004 23:40:39	Bomb	IED	TN2B009C.FTI	ABORT	0	View Tip Alarm	2	

Figure 11 - The initial table view

Threat Image Projection Network (TIPNet™)

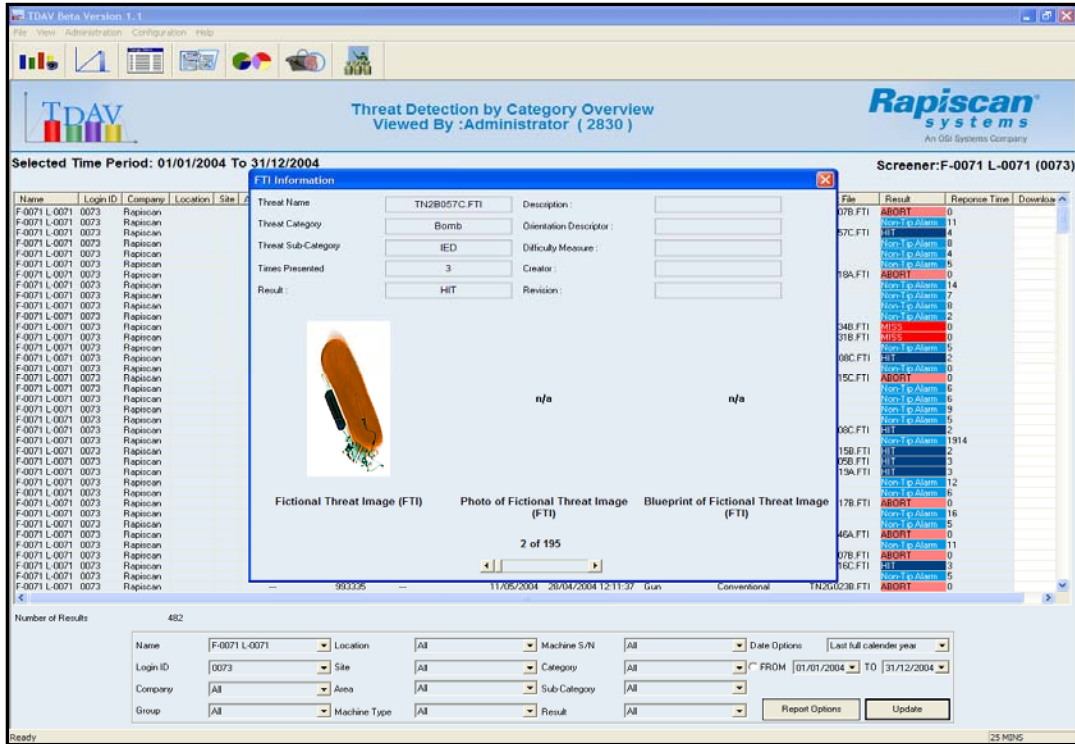


Figure 12 - details pop up with a simple double-click

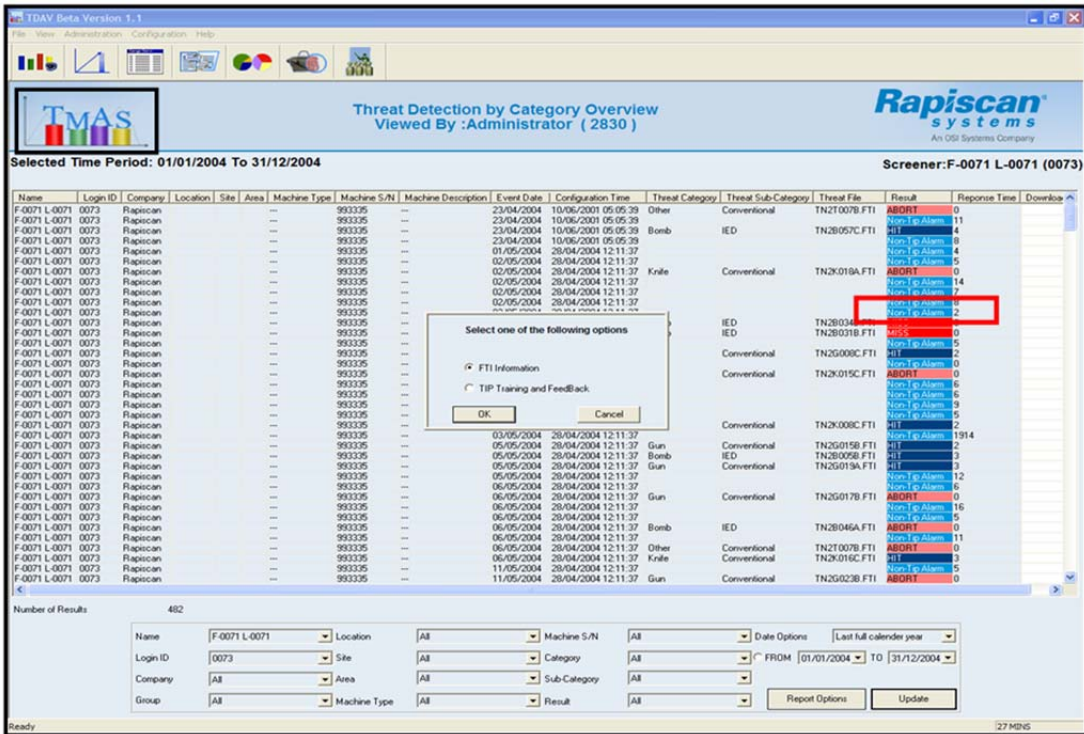


Figure 13 - Double-click a MISS and view either the TIP information or the image



TIP Training and Feedback Overview

The *TIP Training and Feedback Overview* enables the user to review all missed TIP images for a particular screener.

The overview consists of the following:

- Scrolling of the missed image as seen on the X-ray machine
- Image processing functions used through the Control Panel
- A visible reference to the actual TIP that has been missed
- The ability to re-define the search criteria, e.g., select another user
- The missed image can be saved as a .jpg or .bmp

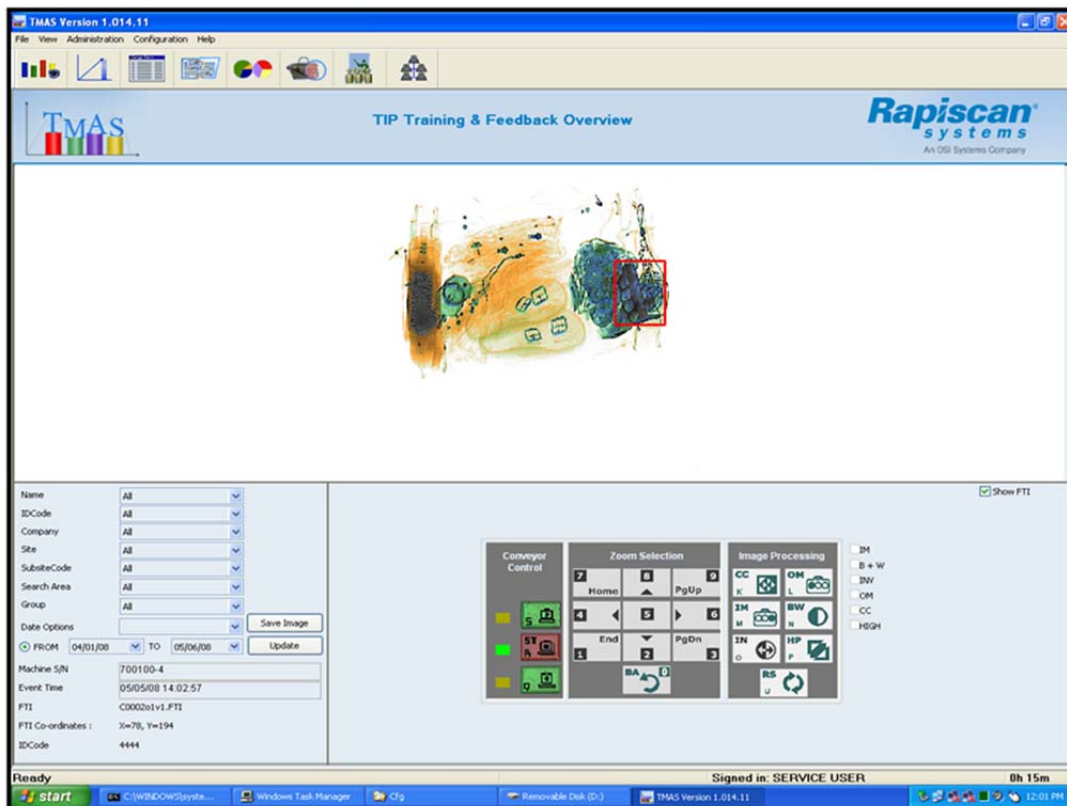


Figure 14 - This view can allow a supervisor to assess competency or as a training tool with the operator to help improve performance



TIPNet Overview

The *TIPNet Overview* enables the user to review daily TIP data performance. The overview consists of the following:

- Number of HITS and MISSES recorded
- Bag throughput since screener's last logon
- Number of TIPs presented since screener's last logon
- Current status of X-ray machine: online \ offline

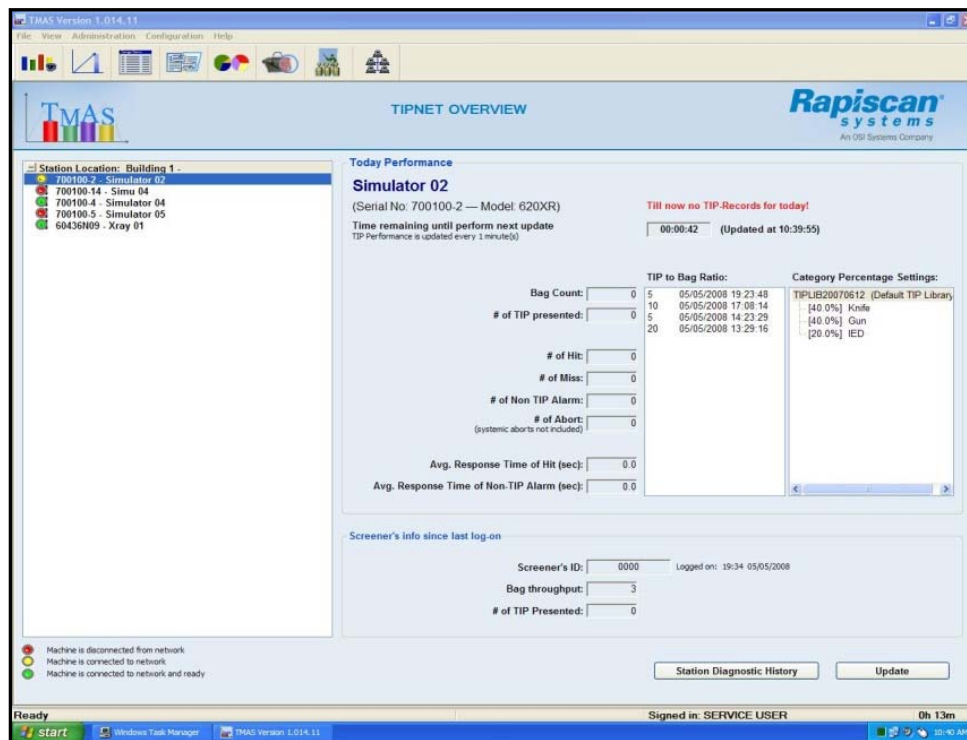


Figure 15 - In addition to screener assessment, system information helps track usage levels

Configuration & Installation

Addressing High-Storage Capacity Requirements

Many options are available with the implementation of a TIPNet system. The customer's data storage requirements are a significant factor. The need to retain and access historical data will determine the needed storage capacity. The more installed units, the higher the required storage capacity.

Dependent on the customer's requirements, comprehensive storage of the historic data from TIPNet can be accomplished across the network. External hard drives can be included as well as tape backups. Figure 16 shows a typical configuration that addresses the need for high storage capacity.

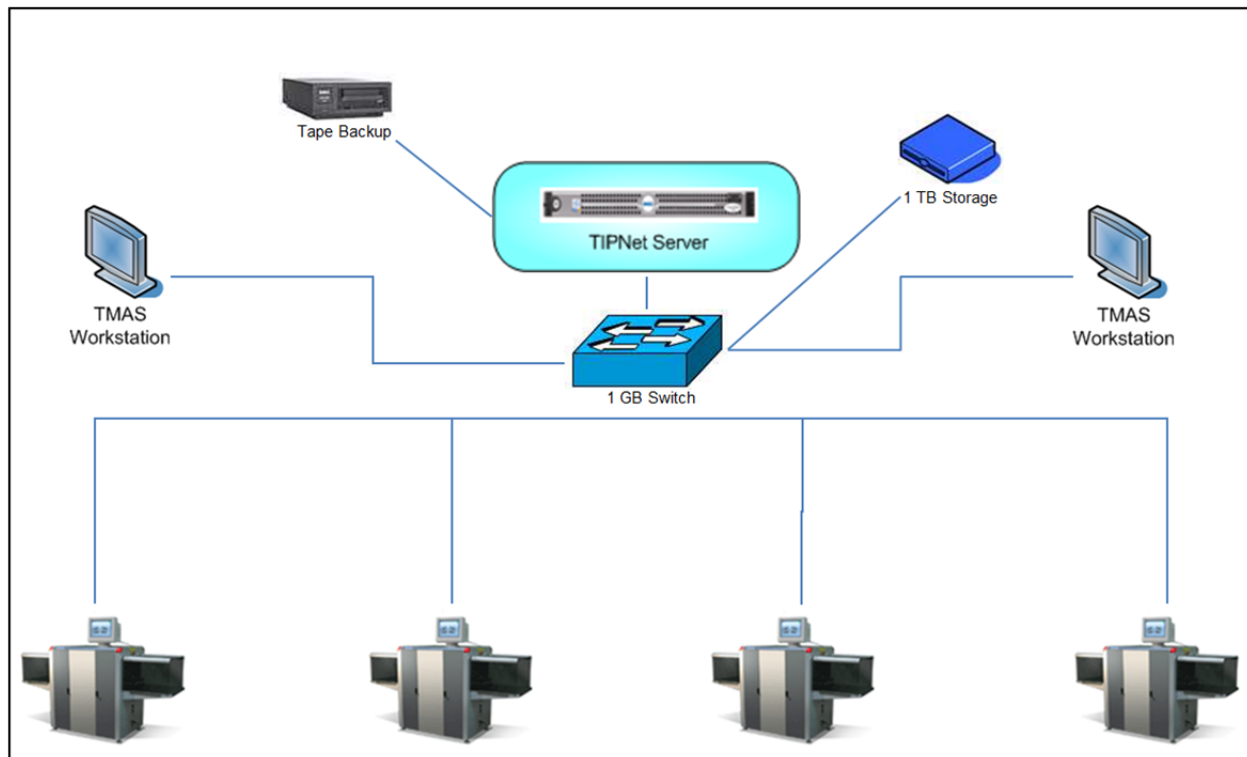


Figure 16 - Typical configuration with a tape backup of the server and a 1TB external hard drive

Installation

Rapiscan can provide all the necessary software, and engineering support for the implementation of a TIPNet work. Our Engineers will work with the client's IT Department to ensure the smooth implementation of the network systems.

The TIPNet supply covers the covers

1. Software to update Rapiscan 600 Series machine
2. TIPNet server hardware with all necessary licensing
3. TMAS workstation hardware and software
4. Installation and commissioning of the TIPNet product

The Rapiscan TIPNet system uses the customer's existing network cabling. Where this is reaching capacity, Rapiscan can advise the customer on network capacity requirements for TIPNet and the identification of suitable Network Switches.

TIPNET Installation Checklist

The following relevant protocols and procedures should be in place prior to the arrival of Rapiscan on site for the TIPNet installation. If all points listed are not completed by arrival of the engineer, Rapiscan cannot be held responsible for delays in completion of installation dates.

- All Rapiscan equipment should be unpacked, in the correct location and ready to use (X-ray machines, supervisor stations, server).
- All X-ray machines should be tested and be working correctly.

- Each of the X-ray machines should have 2 power points and a RJ45 Ethernet connector point.
- Each Ethernet connector point for the X-ray machines should go via a switch to an uplink point to the server.
- Any single cable should not stretch over 85 meters.
- There should be Cat 5e cable next to each location of each X-ray machine to allow access via the Ethernet connector point to the network.
- If there is a Network Display System (NDS) setup, it should have the same setup (i.e. power points and Ethernet connector points) as the X-ray machines.
- Each supervisor workstation should have a table to rest the kit (kit consists of PC, monitor, keyboard, mouse and power cables).
- Each supervisor station should have 3 power points and a RJ45 Ethernet connector point.
- Each Ethernet connector point for the supervisor stations should go via a switch to an uplink point to the server.
- There should be Cat 5e cable next to each location for each Supervisor station to allow access via the Ethernet connector point to the network.
- The Server should be placed in a room with enough space for a 24U Server Rack.
- To ensure safety, the server room should be kept as cool as possible (e.g., rooms are usually fitted with air conditioning).
- There should be 2 power points for the server.
- There should be an Ethernet connector point or an uplink switch in the server room which will allow the Server to be connected to the entire network.
- There should be Cat 5e cable next to the server to allow access via the Ethernet connector point or uplink switch to the entire network (LAN).
- The clients IT staff should have in place a dedicated network for the TIPNet system.
- All switches and RJ45 cabling for said network should be supplied by the client.

- All Cat 5e cabling should be long enough to reach from the Ethernet connector point to the X-ray machine/Supervisor station/Server.
- All Cat 5e cabling should be supplied by the customer.
- All cabling throughout network (LAN) should be tested prior to the arrival of the Rapiscan Installation Specialist.
- A range of 50 static IP addresses should be supplied by the customers IT staff.

Safety

All Rapiscan Systems products comply with applicable international health and safety regulations including USA FDA X-ray systems (Federal Standard 21CFR 1020.40) and Health and Safety at Work Act 1974-section 6, Amended by the Consumer Protection Act 1987. Maximum leakage radiation is less than 0.1mR/hr (1μ Sv/hr) in contact with outer panels.

All 600 Series X-ray machines are CE compliant, FCC & IEC compliant and UL compliant.

All 600 Series X-ray machines are film safety compliant to ISO 1600/33 DIN requirements.

THE WORLD'S LEADER FOR EFFICIENT, EFFECTIVE SECURITY

With over 75,000 systems deployed in over 100 countries, Rapiscan Systems is the global security solutions provider of choice to governments and companies worldwide. Rapiscan baggage and parcel inspection systems have received multiple approvals, certifications from numerous government agencies including the U.S. Transportation Security Administration (TSA), the UK Department for Transport (DfT) and the European Civil Aviation Conference (ECAC). All Rapiscan products are backed by a worldwide training, maintenance and service organization which is available to customers 24/7. An ISO 9001:2008 certified company; Rapiscan Systems submits its products to rigorous certification and testing bodies, including:

SAFETY ACT

Rapiscan Systems products have been certified by the U.S. Department of Homeland Security for Support Anti-Terrorism by Fostering Effective Technologies (SAFETY) Act of 2002, which provides important benefits to organizations that deploy security technology. For additional information visit www.safetyact.gov.

For additional information on other Advanced Technology Options (ATO), please consult your local distributor or sales representative.

- Threat Image Projection (TIP)
- TIPNet™
- Target™ (Operator Assist Automatic Detection of Bulk Explosives)
- aLEXis™ (Operator Assist Automatic Detection of LAGs Explosives and precursors)
- NARCScan™ (Operator Assist Automatic Detection of Controlled Narcotics)
- Density Threat Alert (DTA)
- Operator Training Program (OTP)
- Multi-System Network Display Station (NDS)
- NETView™ (Network Image Archive Review)
- NEXLink™ (Matrixing, Networking and Multiplexing)



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