

# (NS&TS) SURVEILLANCE SYSTEM

You will be able to monitor and measure the route traffic of your network in real time. The generated reports include information regarding the routes occupancy. At your request, a series of reports and real time alarms can be triggered for example: degrading Answer to Seizure Ratio (ASR), Network Congestion (NC) and other abnormal network events (QoS).

## Real Time Route Classification by Traffic Occupancy

The system will maintain monitoring in its main screen the top route occupancy, being shown in red color those whose occupation surpasses 96%,

Also shows in yellow color those routes in which its occupancy is from 64% to 96%, in green color when its occupancy is in between 32% and 64% and in blue color all other routes in which its occupancy is lower than 32%.

### Support SMS traffic

- ⦿ For IS-41
- ⦿ For GSM

Route	Active Trunks	Failed Trunks	Incoming	Outgoing	Occupancy
Test. (3)	2	0	47%	42%	99%
Test. (4)	1	0	41%	47%	98%
Test. (5)	1	0	55%	35%	90%
Test. (6)	4	0	31%	49%	80%
Test. (7)	3	0	41%	29%	70%
Test. (8)	5	0	42%	26%	68%
Test. (9)	5	0	32%	23%	55%
Test. (10)	3	0	38%	11%	49%
Test. (11)	3	0	17%	13%	30%
Test. (12)	6	0	12%	16%	28%
Test. (13)	4	0	9%	17%	26%
Test. (14)	0	0	12%	12%	24%
Test. (15)	0	0	11%	9%	20%

## Real Time Network Status and Traffic Supervision

The NSTS is a telecommunication network surveillance system that provides a real time active picture of the state of the routes, is a powerful tool to monitor, analyze, manage and isolate any SS7 network or traffic relate problem to ensure the highest grade-of-service to customer.

The system is based in Real Time Statistics taken from signaling messages (IAM, SAM, ACM, ANM, REL and RLC) traveling through network matrix topology.

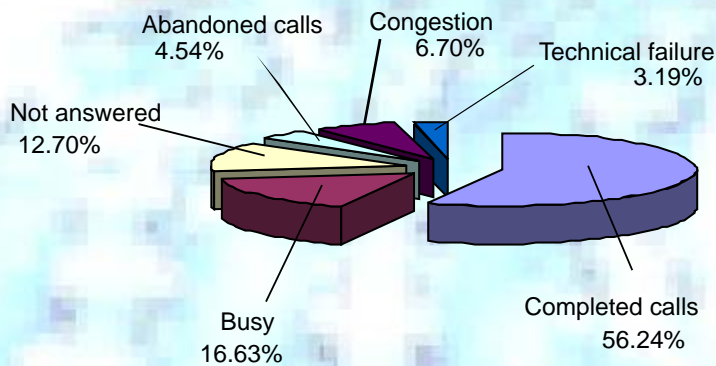
### ➤ Centralized Real Time Network Monitoring:

- Active network picture of the Network.
- Real Time Route Classification by Traffic Occupancy.
- Routes state detail
- Route's CICs state detail
- Alarm on abnormal network event based on traffic pattern.
- Network Route Congestion.
- Data link failure.

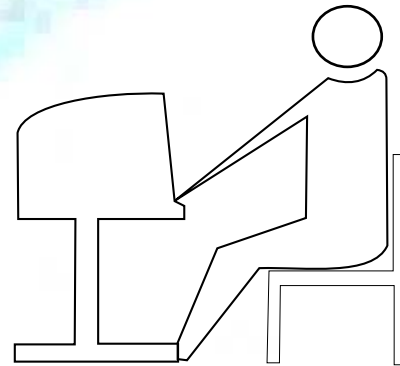
# Off Line Traffic Supervision

The following features are available in the Operating System

- **Quality of Service (QoS):**  
Network Nodes statistic and performance Monitoring for incoming / outgoing transit calls:
  - Call Completion Rate
  - Technical Failure
  - Congestion
  - Abandoned calls
  - Not answered
  - Busy
- **Call tracing surveillance / monitoring:**  
Real Time call tracing list selected by Origin (A number) and / or destination (B number).
- **List of users with busy signal**  
(causing traffic congestion)
- **List of unused CICs**  
(possibly damaged)
- **Busy hours**  
(daily, between ranges)



**Node X or Telco X incoming calls**



## Traffic Behavior and Network planning:

A traffic measurement application is provided which utilizes the call activity data generated from the signaling information to determine traffic load Erlang Measurement over the route level, the network element level and also on a specific group of customers.

R-TIP ability to measure traffic in real time is a useful tool in planning and optimizing your network by determining route congestion levels and the fulfillment of Service Level requirements. The software based on a DATABASE will provide a report on the number of circuits required to carry the total amount of traffic without congestion. This data will be used for the forecasting and dimensioning of route capacity to provide the required level of service.

## Users causing traffic congestion "TCU"

The NSTS uses "TCU" query to determine which subscriber numbers are being called many times and whose phone or PBX is busy. The system report the (top list of users) associated with a time lapse.

## The NSTS advantages:

- 1.- Is independent of central office vendor.
- 2.- Does not required any SMDR (Station Messa Detail Record) ports
- 3.- Do not need any old X.25 devices.
- 4.-Accept any CDR formats.
- 5.- Results in faster, more abundant and better analysis for locale traffic management QoS Supervision.