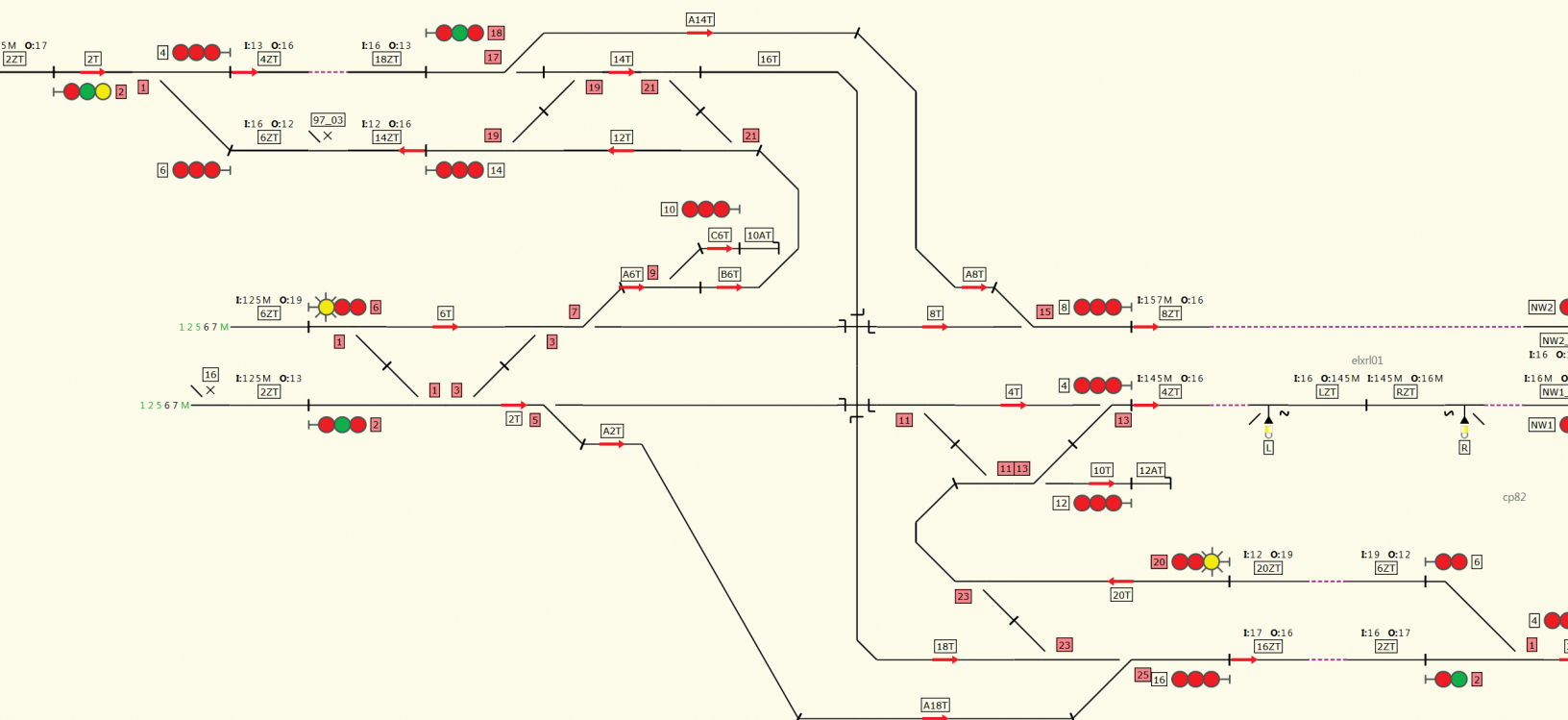


# **SATS:** *An advanced signal design testing and simulation tool*

- Improve testing accuracy
- Reduce field time
- Easy to configure, set up and use; <3 min per asset to set up
- Location setup automation
- Automated testing
- Fully integrated with PTC applications
- Updated frequently with new features and compiler support





## **The Right Testing System for PTC**

Positive Train Control (PTC) has placed a premium on communications and signaling testing, as microprocessor-based software systems have increased in scale and complexity, and rendered traditional, highly manual testing processes insufficient. Princeton Consultants developed the Signal Application Testing System (SATS), a robust simulation tool that improves and substantially automates rail system testing. SATS is now the preferred testing solution for hundreds of engineers, managers and designers.

## **Improved Testing Accuracy**

SATS automates many tests and finds errors that may have been missed during manual assessment. SATS users find 80% or more of software errors during simulation.

## **Reduced Field Time**

SATS users find most errors in the office, not in the field, and they quickly locate problem areas. Testing an entire cutover or project at once is straightforward, saving valuable time.

## **Defined Processes, Enabled Scale Up**

With SATS, test managers instill defined processes, and better manage a growing software portfolio.

## **Simplified, Accelerated Training**

Through display of aspect progression, demonstrated train movement, and logic equation structure, SATS enables new or inexperienced signal engineers to quickly understand a signal system. Typically, new hires are performing simulation testing within two weeks of being hired.

## **Prompt, Expert Support**

Princeton Consultants' SATS team responds promptly to user questions about the software—and to broader issues about PTC communications and signaling.





“SATS has allowed us to safely and efficiently manage an unprecedented volume of wayside signal projects and is an essential tool that will allow us to manage a large portfolio of wayside signal software over the next generation.”

*Terry Harris*  
*Assistant Chief Engineer, C&S*  
*CSX Transportation*

“Princeton Consultants’ SATS system has proven to be a great training tool and, with the capability to load and simulate multiple locations together, has helped reduce our in-service time on Norfolk Southern.”

*Ron Miller*  
*Assistant Chief Engineer, S&E Design*  
*Norfolk Southern Corporation*

## **SELECT SATS USERS**

Conrail  
CSX  
Interrail  
Kansas City  
Southern  
National Signal  
Technologies  
Norfolk Southern  
RJ Corman  
Siemens  
Signal South  
United Rail  
Xorail

## **Supported Signaling Equipment**

EC4  
EC5  
ElectroLogIXS  
Microlok II  
VHLC

## **Supported Software Compilers**

ACE  
ALC  
ALP  
Alstom PTC Configuration Tool  
Ansaldo WIU Application Builder  
Genisys II  
Microlok II  
NVALC

## **Supported PTC Equipment**

Alstom WIU  
Ansaldo WIU

## **Built-in RR Nomenclatures**

CN  
CSX  
KCS  
NS  
UP  
*Other RRs supported via  
manual configuration.*



# PRINCETON CONSULTANTS

*Information Technology and Management Consulting*

**We know RAIL SYSTEMS. We know IT.**

**[www.Princeton.com](http://www.Princeton.com) • [www.Princeton.com/SATS](http://www.Princeton.com/SATS)**

Princeton Consultants blends software development, data science and management consulting to help railroads and other transportation companies improve asset utilization and operational effectiveness. Founded in 1981, we have partnered with Class I railroads on some of the industry's most challenging initiatives. SATS is one example of our trailblazing work in the following areas:

## Positive Train Control

- PTC communication tools and on-board management systems
- Systems integration, best-practice operational processes consulting, and disaster recovery/business continuity.

## Communications & Signals

- Custom software solutions to improve process accuracy
- Systems management design and implementation

## Load Planning

Train planning system development, based on proprietary optimization technology.

## Rail Car Fleet Management

Operational systems development and process improvement to manage large rail car fleets.



***Contact us for more information and a demo.***

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