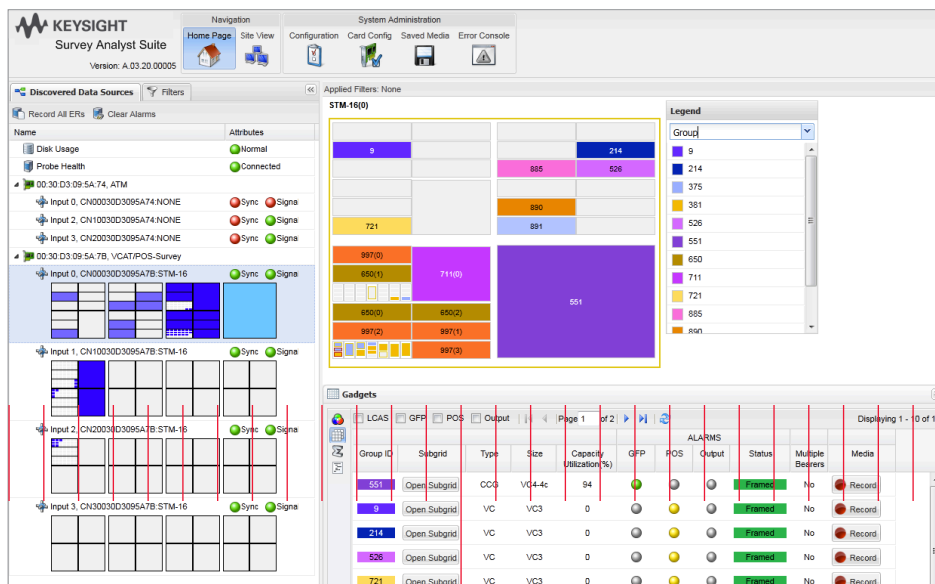


Keysight Technologies Survey Analyst Suite

Data Sheet



The Link Analysis Package provides a set of capabilities that accelerates network survey, link discovery and analysis tasking for networks to answer three fundamental questions:

What traffic is present?

What is the level of traffic?

What is the structure of the traffic?

Overview

The rapid world-wide proliferation of wireless networks has created unprecedented challenges for today's analysts who must keep pace and understand the complex signaling structure of these dynamically changing network links and protocols.

Numerous vendor variants and evolutionary changes make the analyst's job even more complex.

Traditional analytic software tools tend to be manually intensive, require steep learning curves and provide minimal support for emerging protocols or variants.

Keysight Technologies, Inc. provides a new generation of analytic capability with our Survey Analyst's Suite (SAS) solution that is powerful yet easy to use, vendor variant independent and supports numerous network link protocols.

Key Features and Benefits

- Continuous real-time auto discovery of network signaling and content – requires no prior knowledge dramatically reducing the time required to conduct most survey tasks
- Live analysis on links – Keysight advanced fingerprinting algorithms accelerate tributary and link analysis from hours to minutes, much more efficiently than time consuming traditional file based only analysis
- Comprehensive web-based unified workspace – deploys easily, integrates into multi-user environments and provides a visual toolset for improved analysis of previously unknown protocols.
- Deep inspection of meta-data specific to 2G or 3G wireless networks allows more thorough assessment of the value of signaling sources
- Quality indicators to show correct alignment – raises the quality, reliability and confidence in analyzed and reported traffic
- Personalized workflow – the capability to arrange and align the analytic tools for a specific mission for workgroups or individual analysts

Solution Overview

The Link Analysis Package leverages Keysight's proven communications domain knowledge and expertise in network protocols to provide a comprehensive analytic solution for the network survey task.

The core acquisition platform currently provides simultaneous coverage for 2G (GSM and CDMA) and, 3G UMTS and LTE, along with numerous transport technologies.

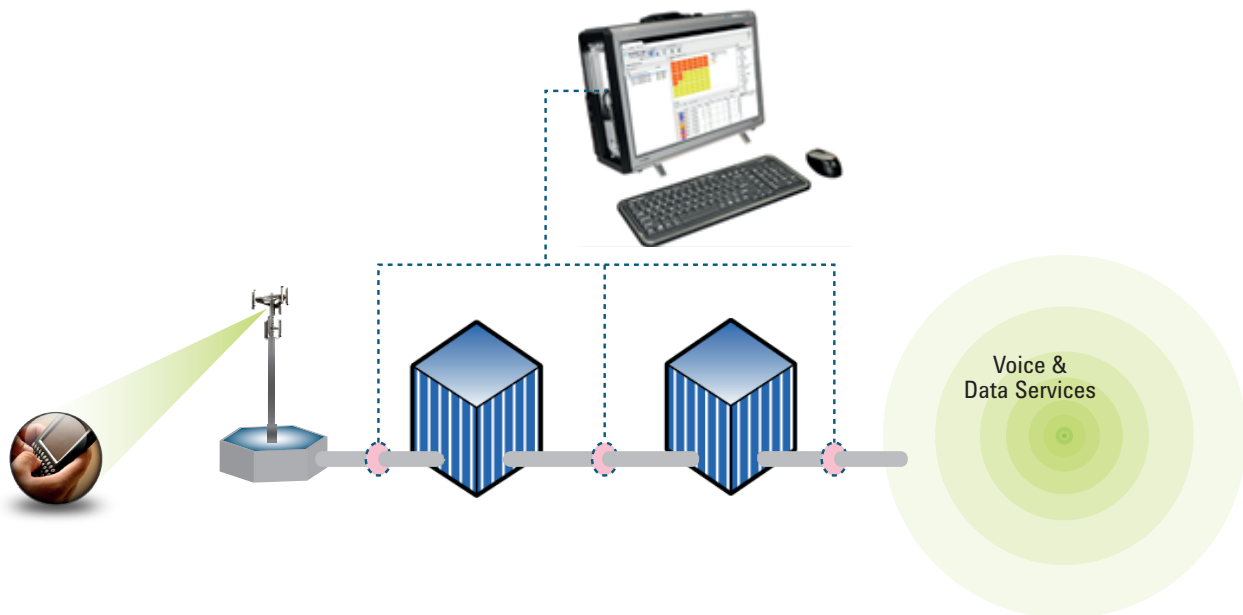


Figure 1. Keysight SAS supports a broad range of network interfaces through passive monitoring

Architecture

The link analysis package is comprised of four key components within a single platform.

1. The Web browser GUI and analysis application software
2. Event Record Generator (ERG) Acquisition Chassis – This includes acquisition I/O cards that support multiple line rates. The chassis supports auto-discovery of traffic from a live monitored network or via playback from previously captured traffic through the acquisition cards.
3. An application server that collects and processes information from the ERG to provide the content and presentation for the user application components
4. A database for storing real-time data retrieved from the ERG for future processing and display to the user applications

An integrated survey tool with real-time detection, analysis of technologies and meta-data

Acquisition Quality Indicators



A key initial step is to ensure the signal is properly monitored. The SAS GUI provides immediate feedback to the user to show the health of each monitored link.

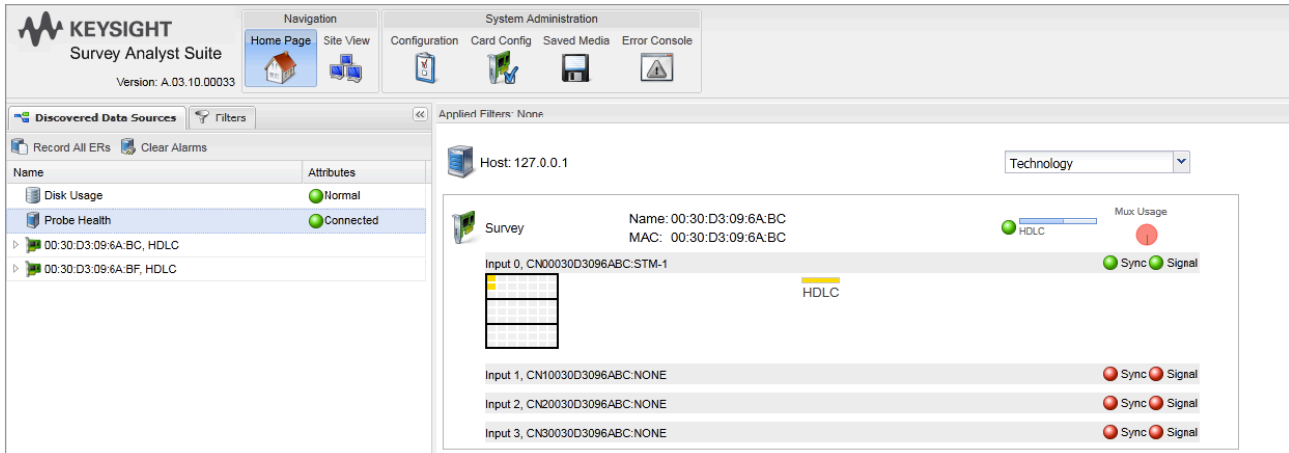


Figure 2. Initial view of monitored interfaces

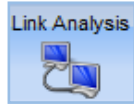
The interface shows numerous attributes of a monitored signal, including:

- Proper synchronization
- Detected transport
- Detected structure of containers – from 10 G to sub-rates within E1
- Detected technologies and protocols, color coded for the user

At a glance, the analyst can quickly ascertain the mix of traffic not only on a physical interface, but the complex structures within

Higher confidence and avoided repeated testing due to incomplete monitoring.

Link Analysis – What’s on the link?



The Link Analysis Package provides a graphical view into network technologies.

Users are presented with an intuitive visual overview of the monitored interfaces, including the makeup of traffic on the various links. All discovered survey results are presented intuitively for accelerated analysis.

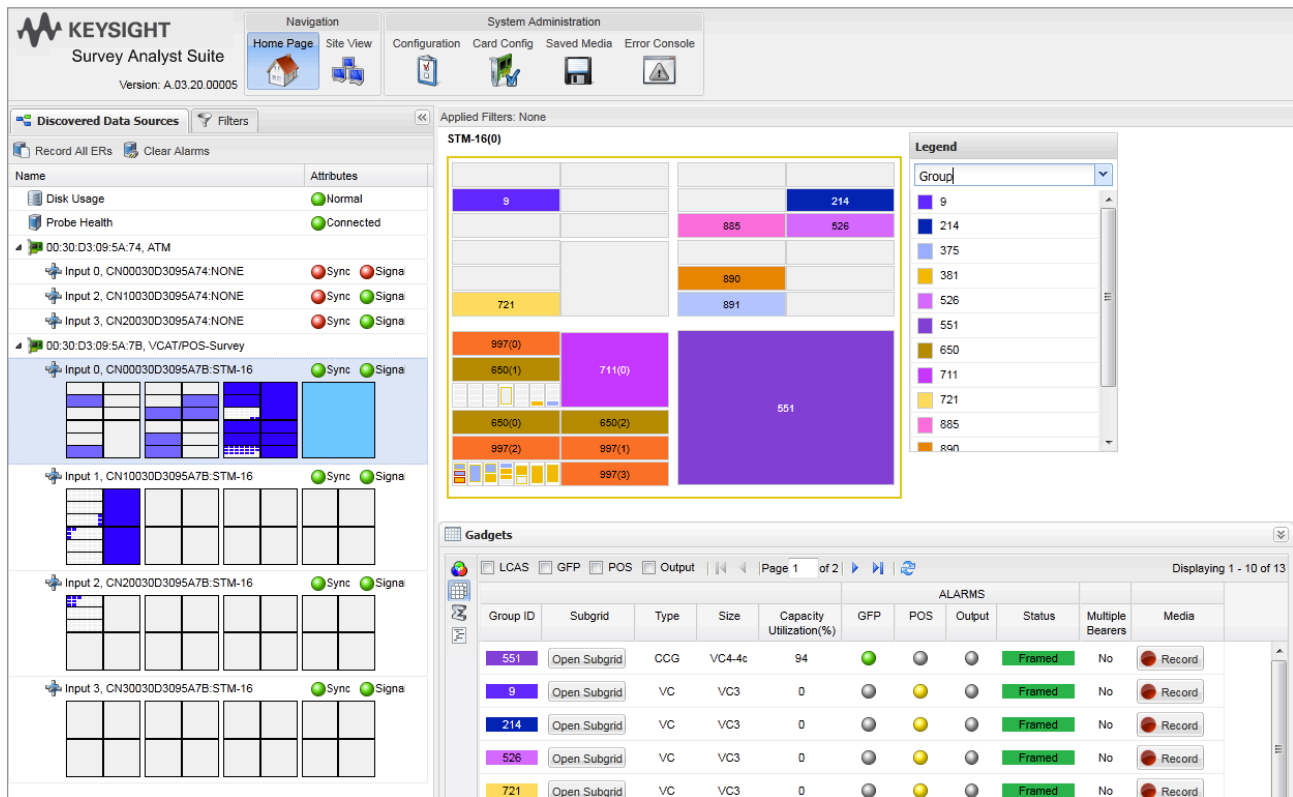


Figure 4. Example display of mixed technologies and tributaries on a STM-16

The SAS link analysis toolset is designed to quickly and thoroughly examine relevant information discovered in the link traffic.

Additional tasks that can be easily performed include:

- Record streams
- Playback audio
- Forward raw data out of the system’s output ports
- Show traffic statistics, specific to different technologies such as ATM cells or HDLC frames
- Reveal meta-data

Rapid real-time detection of the signals of interest for further analysis

Product Comparison

The link traffic information is also filterable through a robust set of filtering options. This can include a range of attributes from transport protocols to meta-data, including:

- Link Layer Protocols including support for HDLC, ATM, VCAT
- Logical Network Interfaces such as Abis, A, luCS, luPS, lub
- Meta-data such as Cell ID or Point Codes

The result allows the user to then determine the specific part of the monitored signal that contained the desired traffic. For example, if a user is only interested in viewing traffic discovered on UMTS luCS links, the filters can be set to only view that specific filtered traffic, as shown below:

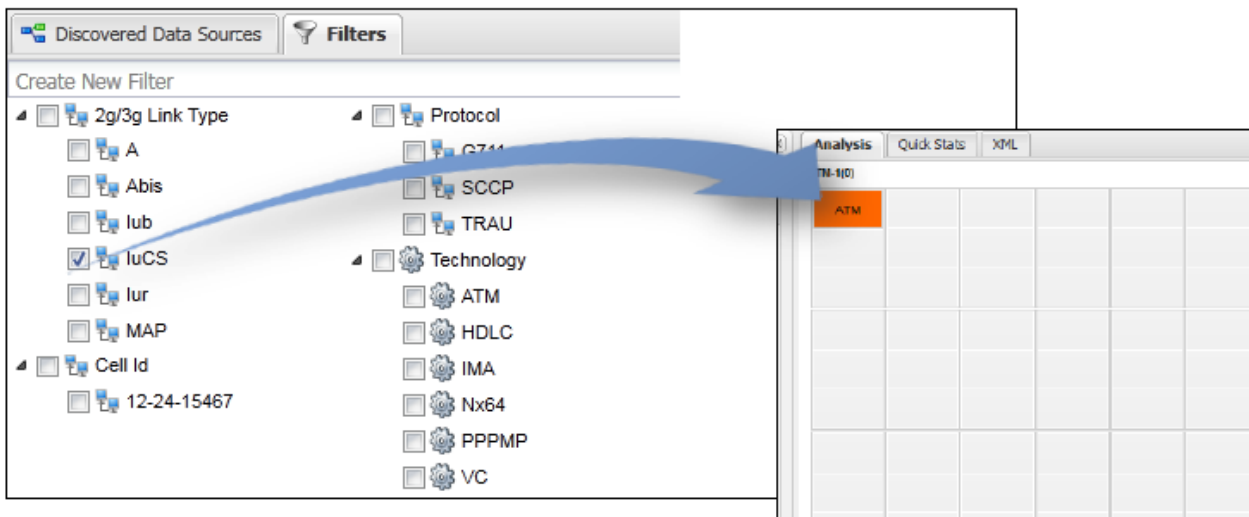
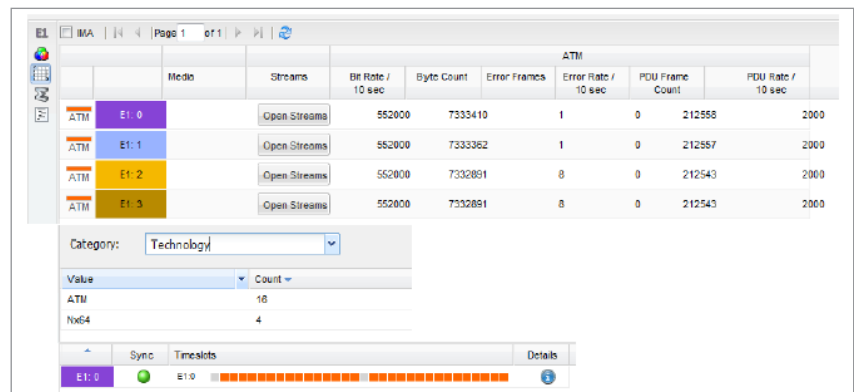


Figure 5. Illustrative example filtering by technology to reveal circuits that contain 3G voice

The filtering can also specify which parts of the structure should be inspected, as shown below:



Isolate signals of interest based on desired network types and meta-data

Figure 6. Example detailed views of E1 to reveal which timeslots contain voice

Site View & Historical Reporting



Reports can be easily generated from a side by side comparison of saved surveys and live traffic. This is useful to quickly assess what has changed on particular links of interest, provides the ability to update monitoring and keeps information yield high.

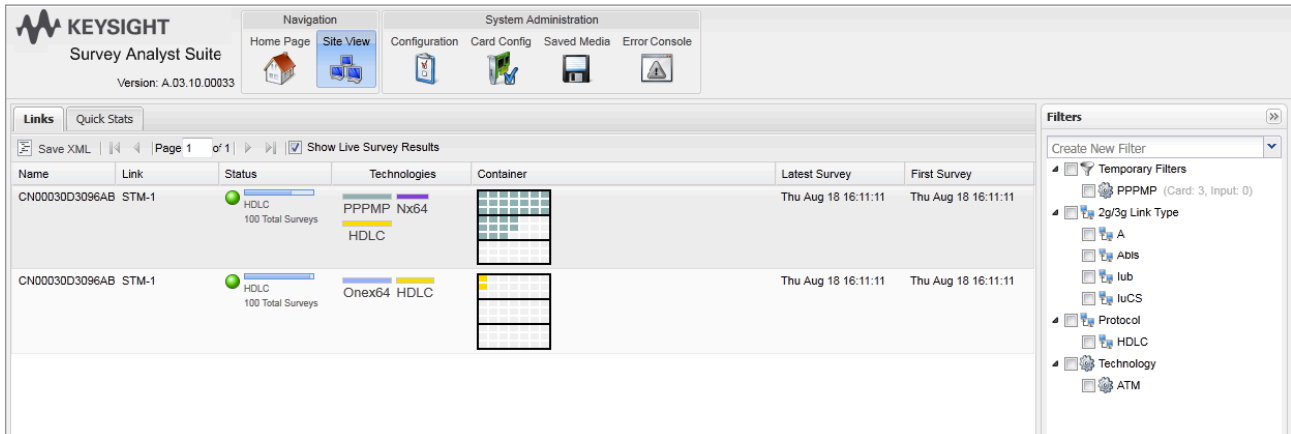
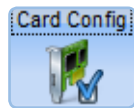


Figure 7. Site View showing results from historical surveys

Survey across Multiple Technologies



A key value of Keysight SAS is the ability to detect very different technologies. Through easy configuration, the user can select which technologies should be attempted during autodiscovery.

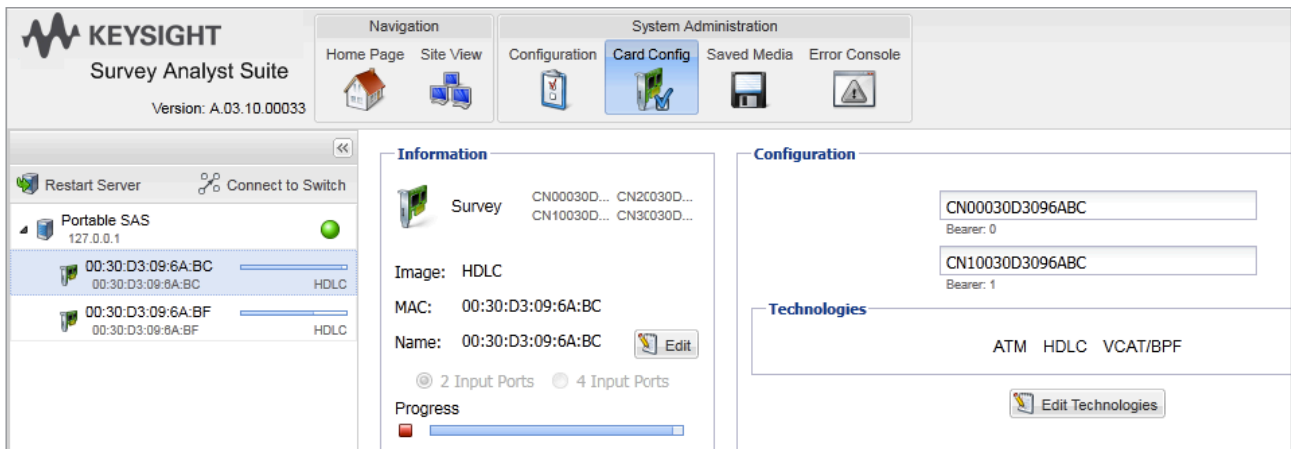




Figure 8. Interface for configuration of acquisition cards

Historical views to reveal changes across time, including detailed previous survey results

Specifications

| Portable Chassis | |
|---------------------------|--|
| Dimensions | 4.30" (D) x 14" (H) x 16.75" (W) |
| Weight | 15 lbs |
| Power | 460 W 110/220 V 50/60 Hz |
| Display | 17" WUXGA+ LCD up to 1920x1200 |
| OS | Redhat |
| Available slots | 2 |
| Entry Level Chassis | |
| Type | 2U Telecom Server or ATCA |
| Power | AC or DC |
| OS | Redhat or Monte Vista |
| Available slots | 2 with expansion to additional chassis |
| Entry Level Chassis | |
| Type | PCI-E or PCI-X |
| Physical Interfaces (SFP) | GigE Electrical GigE Optical OC3/STM1 Optical STM4/STM16 Optical 10G |

Comparison of SAS Editions

| | SAS Portable | SAS Entry |
|-----------------------------|---|---|
| |  |  |
| Host platform | Portable | ATCA or Dell |
| Number of Acquisition Cards | 2 | Scalable per 2U Dell or ATCA |
| User Interface | Local, Web | Remote, Web |
| Users | 1 | 10 |

Additional Information

For further information regarding Keysight's Survey Analyst Suite or to request a quote please email: stuart_connelly@keysight.com

Flexibility to adapt to different physical interfaces, technologies, and network types

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