



it's about time

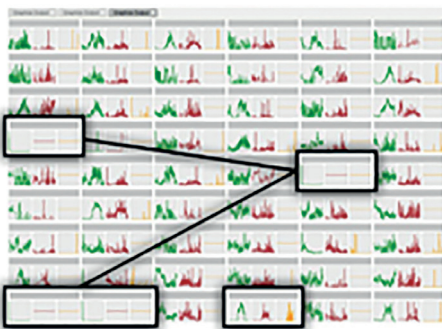
# Kx for Telco

## Real time data processing and analytics for Telecommunications

Telecommunications companies face challenges in processing massive data volumes arising from the multiplicity of devices connected to their networks and the usage patterns over a number of channels.

Kx for Telco helps communications service providers (CSPs) harness their real-time and historical data for improved planning and operations, enhanced customer engagement, and the introduction of new products and services.

Kx enables the correlation of data across an entire telecom network, including call detail records, core network data, radio access network data, user-plane data, and location service records, at unprecedented speed and scale.



### G Plot: Pattern matching to identify potential issues

1855 cells plotted by minute (x axis):

- subscribers (green)
- latency (red)
- congestion (yellow)

### Visual Inspector

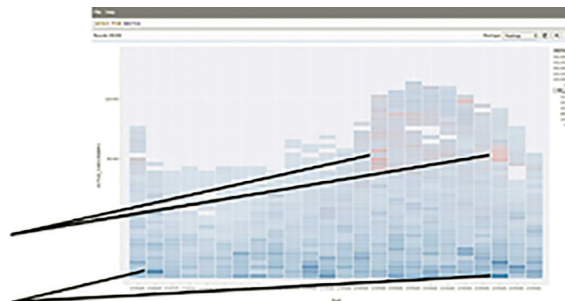
X: Time (24 bins)

Y: Active Subscribers (50 bins)

Color: Congestion (red is more)  
Alpha: Latency (darker is more)

*Network is most congested at 2:00 PM and 9:00 PM*

*Why is there a high latency with few subscribers at these times?*



With a rapid application development environment and a real-time complex event processing engine, vector and parallel validation and estimation algorithms, Kx enables new processes and analytic applications to be rapidly developed, tested and deployed.

Kx for Telco can be deployed on premises, or in the cloud.

## At a Glance



Kx for Telco is an integrated platform for ingesting, processing and analyzing massive amounts of streaming and historical data from networks, devices, and other data sources, to support operations, service level management, state and performance propagation, fraud detection, and billing.

## The Kx Advantage

- One single, integrated platform for network and customer data analytics with an interactive development environment, not a collection of incompatible tools and loosely coupled projects
- Analyzes network data 10s to 100s of times more quickly than alternatives for competitive advantage and lower TCO
- Provides a customer service quality model for increased customer satisfaction and reduced customer churn
- Enables real-time state and performance information aggregation, propagation, complex event processing and alerting
- Ingests, validates, estimates, filters and cleanses streaming, real-time and batch data, using vector and parallelized algorithms
- Supports any state, event type, attribute, message, and frequency
- Scales to hundreds of millions of network elements, trillions of records, while maintaining performance
- Enterprise-grade reliability, redundancy, security, auditing, and compression

Kx for Telco can be deployed in Telcos for:

## Network Planning

Kx for Telco allows CSPs to proactively plan their network investment, develop build schedules, and introduce new technologies and services such as 5G and IoT by forecasting traffic loads and identifying quality targets based on the ingest, storage, and analysis of historical and/or real-time data.

## Mobile Network Optimization

CSPs can analyze a wide range of cell tower metrics such as service traffic over time, session data, geolocation, cell configuration, interference, noise, and signal strength allowing mobile operators to make statistical inferences to more efficiently manage their network. Analytics can be used to identify trouble spots and visualize various patterns in their network.

## Improving Customer Experience and Retention

Understanding subscriber behaviours and personalising or simplifying subscriber interactions are fundamental to improving customer experience.

Kx for Telco allows CSPs to build a model of customer quality for their network by consolidating and correlating data from a multitude of sources. Using the model, CSPs can evaluate customer satisfaction, reduce customer churn, improve service quality, and provide more attractive service offerings to increase customer loyalty and retention.

## About Kx

Kx has been the software leader for complex analytics on massive-scale streaming data for over two decades. The Kx technology is an established and trusted standard for trading, surveillance and research in financial services. Kx has emerged as the elegant, integrated solution to the analytic needs of the Pharma, Retail, Utilities and High Tech Manufacturing industries scaling effortlessly to the data challenges of the Internet of Things.

Kx is a division of First Derivatives plc. Listed on the London Stock Exchange [FDP:LN] First Derivatives is a specialist software and consulting organization with a uninterrupted track record of customer success and profitable growth since it was listed in 2002.

## Mobile Network Monetization

CSPs are interested in finding new ways to leverage the mobile data collected in their network. Being unable to take advantage of this data means lost revenue opportunities.

Using Kx for Telco, CSPs can correlate geolocation data with advertiser information, usage patterns, and demographics to offer personalized promotions and advertising, dynamic time-of-use service, and on-demand pricing to stimulate service usage and better utilize network resources.

## Big Fast Data Analytic Solutions

CSPs want to be able to analyse network, service, customer, and regulatory data in real-time in order to effectively manage their businesses.

Kx for Telco can assist CSPs with consolidating disparate data sources to generate insightful reports and analytics. These "big data" analytics can be coupled with traditional data modelling techniques to offer comprehensive analytics across multiple databases in real-time.

With Kx for Telco, CSPs can receive answers in seconds and minutes, instead of hours and days.

## For more information

Contact us at [sales@kx.com](mailto:sales@kx.com) or visit [www.kx.com](http://www.kx.com)

### Kx in Action

#### Visualize and Explore Data

- Kx Dashboards
- Kx Analyst
- Control for Kx
- Streams for Kx

#### Industry Solutions

- Finance
- Surveillance
- Algo
- Flow
- Pharma
- Utilities

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