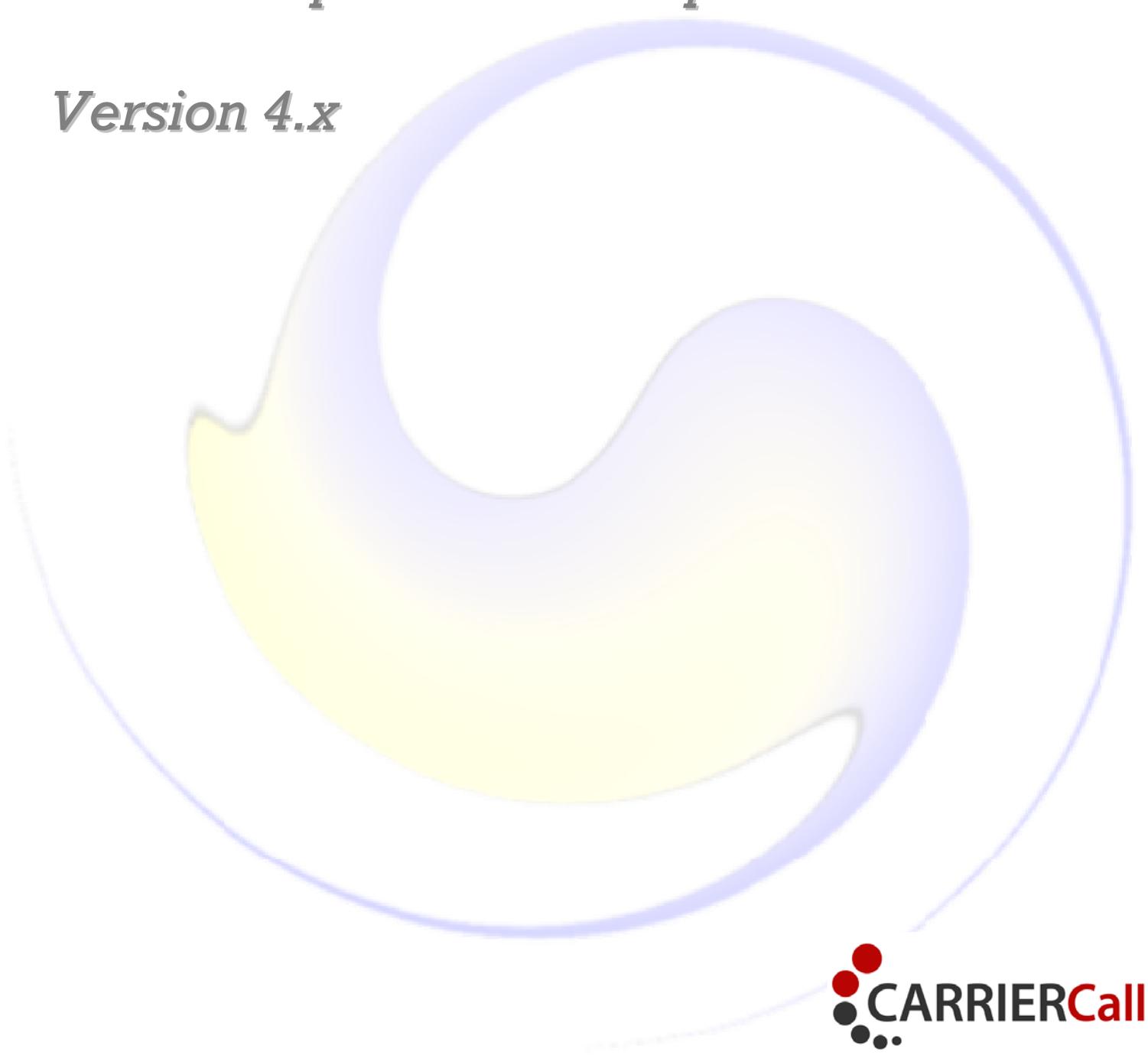


# *XCarrier® product description*

*Version 4.x*





**Industry**  
**Telecommunication**

**Challenges**

Today's telecoms carriers operate in an extremely tough market – one characterised by intense competition, high costs and shrinking margins.

This situation is unlikely to change anytime soon. In fact, in all likelihood, competition in the wholesale telecoms market is set to intensify. Only those operators that are capable of boosting their revenues and reducing their operational costs by automating their business processes will survive and prosper.

Many operators have multiple billing, BSS and OSS systems and sprawling IT infrastructures that cover many territories. Data is not stored centrally, but is held in data silos across the organisation. Key business activities – such as the management of bilateral agreements – are frequently handled manually.

**This situation is no longer sustainable. Operators are leaking revenue – by some accounts up to 15% of their income – due to administrative errors, high costs and inefficient processes.**

Telecoms carriers are increasingly aware of this fact. They realise that there is no sense in maintaining a suite of disparate trading systems. Instead, there is a growing consensus amongst operators that they require a single trading platform – one that is capable of handling all of their wholesale business processes.

**Solution**

Carrier Call was founded in Switzerland in 2002 to fill this gap in the market. The company's award winning **XCarrier** platform enables operators to manage their inter-carrier trading relationships more effectively.

Every carrier knows that the systems which underpin the trading and exchange of international voice traffic are exceedingly complex. But few appreciate the deep linkages that exist between all these business processes and systems. Because these systems are so closely intertwined, a single error in one application can have serious implications further on down the line.

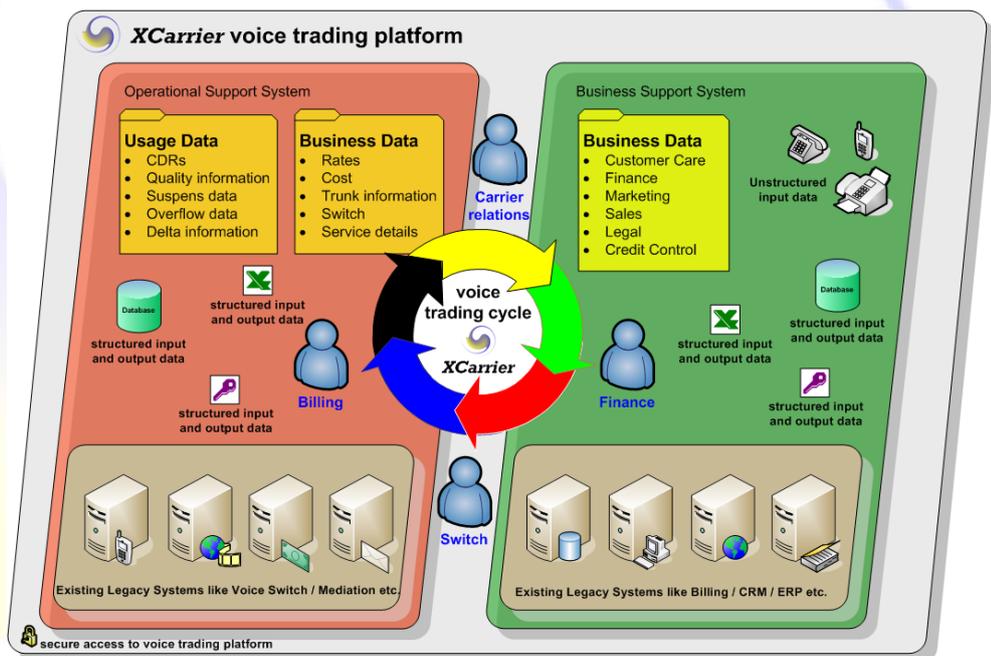
Carrier Call understands these linkages – the company is staffed with highly experienced telecoms software executives – and has developed from scratch a solution that can manage all voice traffic processes in one package.

**XCarrier** is an enterprise inter-carrier trading platform designed for ambitious wholesale operators. Many carriers have multiple billing, BSS and OSS systems and sprawling IT infrastructures covering multiple territories. Data is not stored centrally, but instead held in silos across the enterprise. Key business activities – such as the management of bilateral agreements – are frequently managed manually.

This situation is no longer sustainable. Operators are leaking revenue – by some accounts up to 15% of their income – due to administrative errors, high costs and inefficient processes.

There is a growing consensus amongst operators that they require a single trading platform – one that is capable of handling all of their wholesale business processes. **XCarrier** meets this important requirement. In addition, **XCarrier** enables carriers to cut costs, boost margins and react instantly to changing market conditions.

Besides these benefits, **XCarrier** helps operators to identify sources of revenue leakage; act on new business opportunities; improve operational efficiency and obtain detailed business intelligence reports on call traffic.



In short, **XCarrier** unleashes enterprise wide value. Major functions and features include:

- **Trading** – management of the entire voice trading process covering buying, pricing and selling
- **Price control** – ability to alter prices in real time on a daily and hourly basis
- **Routing** – disseminating traffic through the most appropriate channel
- **Billing** – reconciling received invoices and statements
- **Switch provisioning** – new routes and numbering plans are automatically delivered in real time to switches
- **Dispute management** – tools to automate the whole claim management process
- **Auditing** – services which identify costs and make real savings
- **Invoice management** – production of standard invoice templates



## Overview

***XCarrier* delivers a wide range of benefits to operators. The platform can:**

### **Improve margins:**

Operators can utilise increased negotiating power across all routes. The platform allows you to make regular visits to the market with little effort.

### **Increase revenue opportunities:**

The inter-carrier trading platform allows you to act immediately on special prices, discounts and short-term low price offerings.

### **Point out code mismatches:**

Mismatches between your codes and your suppliers' can have a negative impact on margins. Let's take one example. You might believe that you are terminating calls to a fixed-line destination, however your supplier has the same prefix assigned to a mobile destination. As a result, you end up getting charged a higher price. ***XCarrier*** makes you aware of code differences and highlights potential risks.

### **Improve operational efficiencies:**

Automated tasks like importing, creating and forwarding of price lists, provisioning and outputs to switching / billing units and many more integrated and automated repetitive tasks improves operating efficiency and reduces costs.

### **Avoid data manipulation failures:**

Many operators use Excel spreadsheets to analyse data. This process can be labour-intensive and repetitive. Administrators have to wade through masses of data and make complicated margin calculations using advanced algorithms. They are more likely to make mistakes. These errors can result in lower margins and lost revenue. ***XCarrier*** loads data from various sources into a central repository. This data is then cleansed to ensure that it is completely accurate.

### **Reduce manual work:**

You can view your data using ***XCarrier's central data store***. The system reduces the manual efforts of data mining and visualisation.

***XCarrier*® allows you to manage all your voice traffic processes in one package**





## Business planning

**XCarrier** supports all of your strategic processes and decisions. Operators must provide their customers with the right products and services if they are to increase their margins and boost profits.

Other solutions tend to focus primarily on purchasing or routing decisions. **XCarrier**, on the other hand, supports both the buy and sale sides of your business. Furthermore, it allows you to segment your marketplace and create differentiated product offerings for your customers.

Are you planning to sell to a cost-conscious wholesale player? Or are you intending to offer your services to a mobile customer that needs products with guaranteed CLI and network availability? **XCarrier** supports your business. The solution enables carriers to develop their product portfolios and tailor their services to specific groups of customers.

The system supports virtually any type of business model from advanced wholesale agreements to traditional agreements. A wide range of rate methods, pre-defined or customised are available for users to calculate actual and estimated costs on a per agreement basis. Users can define different purchasing and routing tactics for each product and customer. The system will then automatically identify the most profitable breakout definitions and purchase options. Creating a product portfolio is in many cases an incremental process – carriers often use their current product portfolios and business models to define additional and refined proposals for their customers.

**XCarrier** offers managers access to a reporting portal. The portal contains key performance indicators and business reports based on revenue, product performance, profitability, minute margin, termination cost, traffic volume, quality level, network utilisation and more. A carrier can define additional key performance indicators and formats for customised business reports.

## Commercial operations

Wholesale carriers offer rates, area codes and quality indicators as part of their price lists. **XCarrier** has a sophisticated interface that automatically imports carrier and destination data. The system recognises and memorises each supplier's numbering plan. It then maps the destinations offered against in-house destination definitions to rank suppliers and identify breakout opportunities.

The system's dynamic routing algorithm allows you to implement different routing strategies for each product. You can use rates, quality, volume commitments and traffic patterns to determine routes. In addition, different time-of-day routings are supported. The system offers constant access to the latest quality data to monitor current operations.

**XCarrier** renders tariff setting quick and easy. It automatically calculates a multitude of cost definitions based on actual or future routing structures. Price lists for individual customers can be created and the solution is capable of supporting on-the-fly rate calculations during negotiations.

## Interfaces

**XCarrier** interfaces with different systems in the carrier environment. Perhaps you need to import traffic information from a rating or billing system. Or maybe you need to migrate data into a Call Detail Record (CDR) data store. **XCarrier** can handle both. The solution imports and monitors rates and area codes from suppliers and exports the appropriate information to the billing system. Information from quality and capacity management systems can also be imported into the system using standard APIs.

**XCarrier** provides a bi-directional interface with voice switches. A switch can feed **XCarrier** with current configuration and routing data. **XCarrier** then transforms commercial routing decisions into technical instructions that are directed towards the switch. Configuration instructions can be sent as MML or command scripts.

The **XCarrier** Connector Standard API can easily integrate with existing IT systems. It is designed to work with message-oriented middleware. Carrier Call provides on-going support for its entire APIs, allowing users to upgrade easily to new versions of **XCarrier**. All products come with adapters that can integrate market-leading billing and rating systems.



## **Main features and functionality:**

You can handle your daily voice carrier business using the following **XCarrier** features:

### **Reference Data Management (destination/codes)**

**XCarrier** supports full breakout and area code handling. The unique destination and code sets guarantee data integrity between switch and billing system.

### **Destination and Code mapping**

The built in destination and code mapping module eliminates code mismatches. You can immediately resolve any discrepancies between your code list and the one you receive from your interconnect partner. As soon as any anomaly is identified, **XCarrier** alerts you and suggests a new mapping. Unknown destinations can be mapped to one destination or a main destination can be the source for many sub destinations.

### **Destination and code version control**

Version control on destinations and code lists allows you to prepare for future changes.

### **ABC analysis**

The ABC report lists the current position in the Least Cost Routing (LCR) ranking for a selected carrier. LCR and bandwidth information enables you to focus on relevant destinations. You can use a combination of operational data and calculated target prices to carry out successful price negotiations.

### **Unlimited destination code list imports**

The solution allows you to import destination code lists from various sources.

### **Comparison based on destination code list and optional price information**

Let's say the price per destination is available. XCarrier will take this data and automatically generate a very detailed least cost routing (LCR) table.

### **Destination overview and details in one worksheet**

You can use filters and searches to analyse data centrally. You can examine data at a destination level and hide or show matching code details depending upon your requirements.

### **Pricelist management**

The pricelist grouping feature enables you to create base price lists and additional price lists for specific carriers. You can also use this feature to offer customers targeted price lists. Additionally the system supports floor price list processes to grant you proper sales management.

### **Pricelist distribution**

This feature allows you to automatically distribute pricelists. Not only does this reduce administration, but it also ensures that accurate information is delivered to your customers in a timely fashion.

### **Invoice reconciliation**

Companies want to verify their supplier's invoices. This can result in disputes between suppliers and buyers. The invoice reconciliation plug-in compares invoices with actual data and highlights any discrepancies.

### **Sophisticated data loader for price and code list information.**

Your purchasing agents can view original buying pricelists in a standard format.



### **LCR calculation based on best price and quality parameters**

Create several routings based on buying price and quality parameters. It is possible to eliminate negative margins by excluding expensive routes.

### **Reference data management for other systems**

Reconcile data stored centrally with information in your existing legacy applications.

### **Lightweight Directory Access Protocol (LDAP)**

**XCarrier** comes with full LDAP functionality. This allows users to authenticate security schema against a central managed user authentication system (e.g. Active Directory Services from Microsoft etc.). In addition, you can integrate XCarrier into any existing and modern ICT infrastructure to manage security in one place. User and group permissions are defined in **XCarrier**, while user verification and group association is defined in your existing and central user LDAP environment.

## **System Requirements**

### **Server side requirements**

**XCarrier's** server system is an open, object-based, N-Tier application platform. It is capable of handling large volumes of data. Created with modern application development tools, it provides a user-configurable environment for rapidly adapting to existing and new business requirements.

**XCarrier's** scalable server architecture allows near continuous operation. This allows you to make the most of your hardware platform. **XCarrier** requires an Oracle database running either on Windows 2003 or higher Server, HP-UX, Sun Solaris UNIX or LINUX (Red Hat, SUSE or DEBIAN). This gives users a wide choice of Hardware platforms and operating systems.

### **Hardware (minimum requirements for Intel platform and depending on XDR volume per month)**

- Two or more Intel Dual- or Quad-Core XEON x64 processors ( $\geq 2.50$  GHz)
- At least 24GB memory
- 100GB system hard disc space
- 750GB data hard disc space
- 1GB Network Interface Card (NIC)
- Other hardware as required from the Operating System Manufacturer

### **Software (minimum requirements for Microsoft platform)**

- Windows Server 2008R2 Standard x64 Edition (English)
- Oracle Database Version 11g or newer
- Oracle Application Server Version 11g or newer  
Tomcat, JBOSS or IBM WebSphere are also supported

### **Client side requirements**

To use the **XCarrier** application, you need a Java virtual machine (Java plug-in) installed within any common current web browser.

- We recommend Microsoft Internet Explorer (Version 8.0 or above), Firefox (Version 5.0 or above) or Netscape Navigator (Version 8.0 or above)
- Sun Java Plug-in (JRE Version 1.6 or above)