

think | growth



I-Master[®]

A prepaid and postpaid authentication and rating solution

Generate revenue and customer loyalty with a new array of prepaid and limited credit services

The widespread adoption of VoIP technology is now enabling providers to launch a new class of profitable services designed for credit challenged subscribers and introduce new billing models geared to prepaid, postpaid and postpaid limited credit markets.

The prepaid market's steadily growing global subscriber base offers new revenue streams to global providers. However, in order to attract these subscribers, retain them, and maximize the revenue opportunity they represent, providers need a technology offering that includes a flexible combination of service and features.

Verso I-Master®, an industry leading prepaid and postpaid authentication and rating solution, enables providers to offer IP based services with features to capture new markets and strengthen existing services. In addition, I-Master allows providers to converge back office functions, enabling the deployment of prepaid applications on one network platform to provision and bill between legacy and IP based networks, all while generating greater revenue and ROI.

The Verso I-Master solution, which includes the I-Master Application Server and prepaid application, is deployed by global carriers and service providers that need to expand market growth and win new subscribers via prepaid services.

The I-Master prepaid application is a real-time authentication and rating engine that enables carriers and service providers to deploy the complex rating schemes required to track and recover revenue. I-Master enables service providers to create new, long-term revenue streams by deploying a wide spectrum of new products with prepaid, limited credit, and other specialized billing models. Verso's I-Master solution enables service providers to combine messaging, conferencing, Internet access, on-demand data and other features into competitive offerings designed to attract new subscribers and increase billings from existing subscribers.

The I-Master Application Server provides software-based IVR support and interoperability with any standards-compliant Next Generation Network (NGN) softswitch, while the associated prepaid application provides interactive, real-time rating and billing schemes for managing prepaid and postpaid services. It interfaces with a carrier's infrastructure via standard protocols including SIP, H.323 and RADIUS.

The core infrastructure of this IP based platform includes an Oracle database, running on a Sun Solaris operating system. The solution scales gracefully, supporting as many or as few calls as needed.

➤ The I-Master solution enables carriers to:

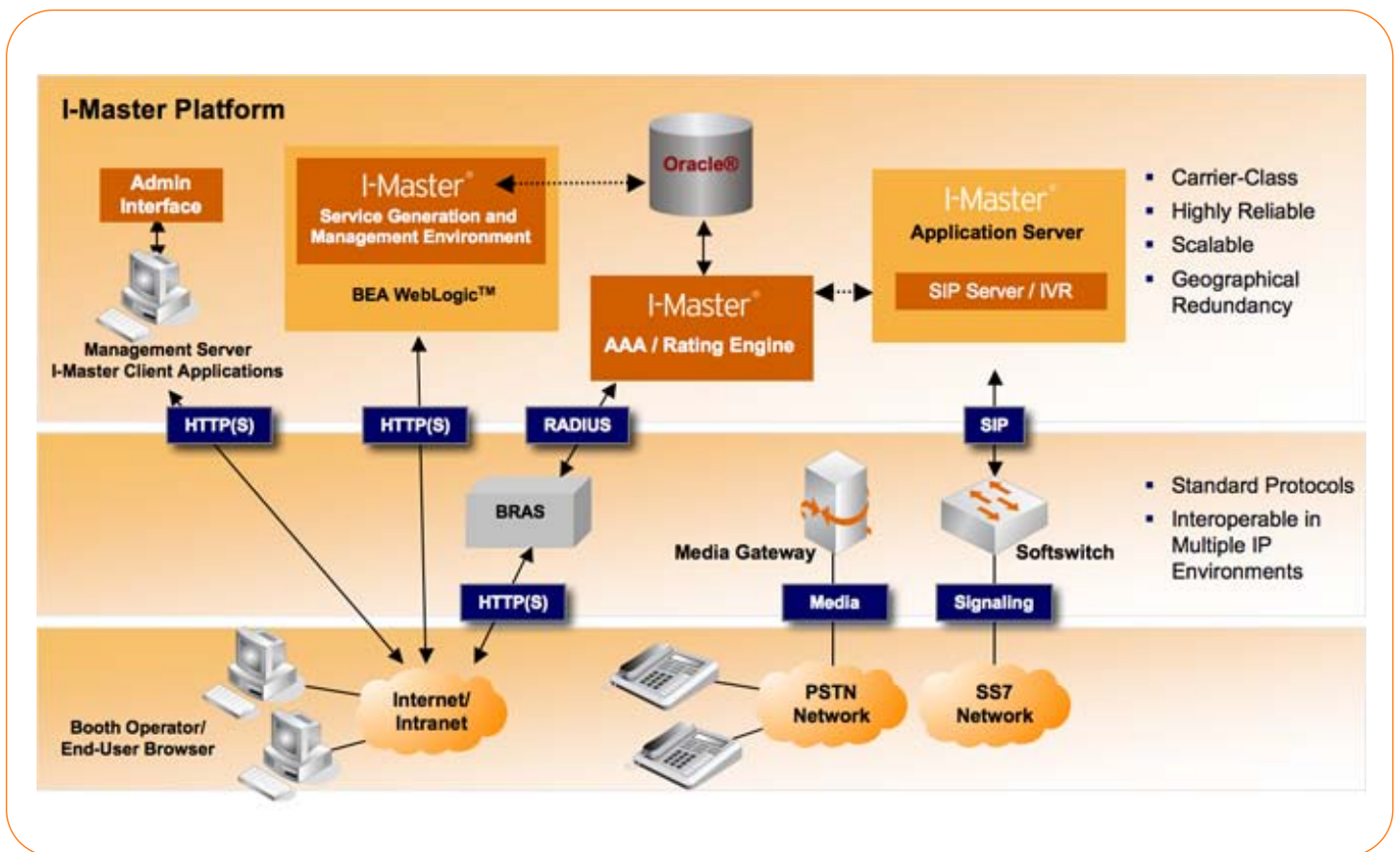
- Generate more revenues and strengthen customer loyalty with a new array of prepaid and limited credit services
- Accelerate ROI by improving profit margins and reducing operational costs
- Deploy an IP based prepaid solution without costly upgrade or development costs

Benefits at a Glance

- ➔ Establish voice and data services
 - Launch prepaid, postpaid and limited credit services (both legacy and IP based)
- ➔ Launch bundled services for voice, data and video
- ➔ Increase subscriber loyalty and decrease churn with personalization features
- ➔ Create, configure and manage services easily
- ➔ Converge back office and billing operations (including processing, service configuration, activation and provisioning)
- ➔ Track and recover revenue

I-Master's personalization features increase loyalty and decrease churn:

- ➔ Personal speed dial
- ➔ Personal language preference
- ➔ Personal blacklist
- ➔ Custom PIN and ANIs
- ➔ Single number termination
- ➔ And more



Solution Value Points

- ➔ Turnkey Authorization, Authentication and Administration (AAA) solution for VoBB, Fixed Line TDM, Calling Cards, Call Back, ADSL, WiFi
- ➔ RADIUS interface for AAA functions for data and content services
- ➔ Interoperability with any third party NGN softswitch platform
- ➔ Ability to interoperate in a multi-vendor, multi-protocol environment
- ➔ Standards-based interface using SIP to third party softswitch
- ➔ End user self care

Turning growth goals into reality

The I-Master solution has been deployed by some of the world's largest calling card providers. CVT, a leader in prepaid calling card solutions, offers over 350 different cards at more than 50,000 points of sale across the United States. The company selected I-Master for a large scale prepaid deployment after an extensive review process.

"Our plans are to continue to aggressively grow the business, and our expectation is to more than double the business in 12 months. The I-Master solution will support that growth. The scalability of the application provides for significant incremental growth with straightforward planning. It is our expectation that the expertise exhibited by Verso in our marketplace will keep CVT moving forward in an evolving marketplace."

William Hinton
Chief Operations Officer, CVT
www.cvtprepaid.com

A shift in the market: Bundled services and prepaid calling cards

Cable operators, Internet service providers (ISPs), and many other new competitors have successfully entered the telecommunications market by offering service bundles that include voice and other services that historically have only been offered by traditional telecom carriers. As a result, carriers are under competitive pressure to respond with the introduction of their own service bundles.

Recent studies indicate that these bundled services actually have better Average Revenue Per User (ARPU) and result in lower churn than the same services when sold individually. This means that providers benefit by going to market with bundled and well-integrated services that enable them to compete effectively, maintain their current subscriber base, and expand market share by attracting new subscribers.

As many new competitors introduce bundled services, the global prepaid calling card market has also exploded. Much of the growth in demand for prepaid services is in emerging economies where many subscribers do not meet the traditional criteria for postpaid billing qualification or cannot afford traditional long distance calling rates. As a result, providers in these regions have faced a rapidly eroding minutes market and an inability to leverage credit challenged subscribers.

More performance, fewer investments

The I-Master solution enables a provider to offer bundled services, deploy a prepaid platform, and converge back office billing and administration while supporting large volumes of traffic that require prepaid rating for complex services. I-Master also supports balance management (in real time) for voice, data and enhanced services.

I-Master's real-time infrastructure offers the scalability to manage increasing volumes of network events with fewer hardware investments, and the responsiveness to process and rate prepaid events.

Generate revenue with bundled services



I-Master prepaid application

The I-Master prepaid application enables service providers to create new, long-term revenue streams by deploying a wide range of new services for prepaid, postpaid and limited credit markets that require specialized billing models. With I-Master, providers can combine messaging, conferencing, Internet access, on-demand data and other services into competitive offerings designed to capture new markets and subscribers as well as increase billings from existing ones.

I-Master offers an interactive, real-time solution for delivering today's most popular prepaid and postpaid limited credit services while managing the complex rating schemes required to support these services.

It combines the separate functions of order processing, service configuration, activation, authentication, provisioning, and customer support onto a single system, enabling service providers to package and deliver virtually any combination of services via voice and/or IP. As a result, providers can leverage the full revenue-generating potential of a fully converged network.

Advanced authentication and rating

I-Master's rating engine creates multi-level service plans that offer customers access to many new services, each of which can have a unique rating structure. It is designed to support a wide variety of incentive, promotional and limited credit rate structures. Its intuitive user interface is also designed for rating and billing simplicity across multiple services.

⇒ Key rating options (in real time) include:

- Support for all currencies and time zones
- Rating assignments per domain/softswitch/gateway, enabling multi-region, global deployment of IP services
- Rating by time of day/day of week
- Multiple calendar support for holidays and weekdays
- Access and DNIS based charges (session initiation/connection charges)
- Three unique period billing increments in each call based on origination/destination which may be independent or the same as the rounding period
- Sequential call rating (rates may vary based on the number of calls made over a recurring period of time)
- And more

⇒ Key rate plan management options include:

- User friendly GUI
- Unlimited rating elements within a rate plan
- Global rating tools for scheduling rate plan changes

A revenue generating end-user portal (SDK)

I-Master enables a provider to create a customized online portal for their subscribers via a software development kit (SDK) that can be designed to match the overall look and feel of a subscriber's corporate site.

The portal allows subscribers to perform a broad menu of functions including open new accounts, add authentication IDs, recharge existing accounts (via balance transfer or credit card) and view account activity and current account balances.

The subscriber portal can serve as a home page to which subscribers return regularly, creating the ideal platform for subscribers' loyalty programs that generate stable, recurring revenue streams.

Online customer care services for wholesalers

Wholesale customers can use the portal to manage their own CSR staff, card batch generation, inventory tracking, and account changes, and to view a variety of reports. In addition, providers can use it to control the product offerings wholesalers are able to distribute as well as the specific rate plans and credit limits that are available to them.

➤ Inventory/account management features include:

- Web-based wholesale, CRM and retail portals
- Support for multiple wholesalers:
 - Wholesalers may be placed on a prepaid model by the service provider:
 - Each call is rated twice in real time. Once using the account rate plan and again using the wholesaler's rate plan. Both the wholesale and retail balances are debited in real time.
 - When the wholesale balance reaches a low threshold point, the system sends email alert.
 - When the wholesale balance reaches zero, no additional calls are permitted for accounts belonging to that wholesaler.
- And more

Billing convergence: prepaid and postpaid

With prepaid services, prepaid accounts are authenticated in real time to ensure the account balance never crosses the zero threshold. With postpaid limited credit, I-Master supports two types of postpaid accounts: with credit limit or without. Accounts designated as having a credit limit will not be permitted to exceed the limit set. I-Master supports traditional postpaid activity and includes the ability to set overdraft limits on an account or product. Call Detail Records (CDRs) are collected and stored for review or may be exported into many different report formats which allow total integration with most accounting and billing systems.

➤ Key Features include:

- Prepaid and postpaid
- Limited credit postpaid
- Multiple authentication IDs
 - No limit to the number of PINs, ANIs or username passwords on one account
- Access restriction by DNIS groups
- And more

➤ Fraud restrictions include:

- Definable fraud policies
 - Product level
 - Batch level
 - Account level
- Daily parameters
 - Maximum total talk duration
 - Maximum single call duration
 - Maximum daily debit for calls
 - Maximum number of recharges
- And more

To view the I-Master prepaid application technical specifications, please refer to the data sheet at www.verso.com/imaster

I-Master Application Server

The I-Master Application Server is a call control service management engine with embedded IVR support. It interfaces with SIP or H.323 and provides the foundation for carriers to leverage RADIUS protocol for Authorization, Authentication and Administration (AAA) functions. In the event a service provider has an existing billing system that supports the RADIUS protocol, the I-Master Application Server may be provided as a standalone solution to enable interoperability to any SIP enabled softswitch. It is an ideal solution for providers currently offering data services that need to enhance their offerings by adding VoBB services but also need to retain existing billing systems.

➤ Key Features include:

- IVR and call control
- Full carrier class scalability
- Full fail-over support
- And more

IVR Services

The I-Master Application Server's enhanced and comprehensive Interactive Voice Response (IVR) services are key to creating bundles and provide the infrastructure to generate and capture revenue streams that have never existed before. It offers embedded, software based IVR functionality required for single and two stage call flows. Also, IVR functionality can be optionally provided by dedicated media servers. In addition to the single and two stage authentication call flows, other optional IVR applications are also supported. These applications can be deployed as standalone applications, or they may be used as a sub menu or embedded application within the main call flow.

➤ Key Features include:

- Single stage calling (ANI authentication)
- Two stage dialing (calling card)
- Single stage calling with pass code verification
- Speed dial
- Call back
- Combined authentication methods
- And more

Scalability and flexibility

The I-Master Application Server grows seamlessly, supporting as many or as few calls as needed, and it easily scales when additional capacity is required. A single I-Master Application Server can also provide support for multiple applications within a single network design.

Service creation, configuration and management

The I-Master Application Server includes a graphical user interface (GUI) management tool for the creation and administration of call flows, which are event-based and include an extensive library of tools.

- Service providers may also create XML-based events to support unique actions within a call flow that may not be available via the default events.
- Multiple call flows may be supported simultaneously based on incoming IP address, trunk group or domain. Unique prompts may also be played based on the user's identity or personal preferences.

The I-Master Application Server can be deployed, configured, and managed remotely using the Verso Clarent Element Management System (CEMS), the web-based tool used for provisioning and managing all components of the Verso network.

At a component level, the I-Master Application Server supports SNMP with comprehensive management information base (MIB). This allows for setting configuration parameters, polling devices for performance statistics, checking status information, and receiving alarms if faults occur.

Operating system

The I-Master Application Server operates on the Solaris operating system on highly reliable SUN hardware and may be deployed in N+1 configuration for fault tolerant environments.

To view the I-Master Application Server technical specifications, please refer to the data sheet at www.verso.com/imaster

A future-proof investment

I-Master is the leading prepaid solution on the market today, a proven platform for generating, retaining and growing additional revenues.

Visionary providers realize the critical need to leverage the latest technology to differentiate their brand and services from the competition in order to survive as their marketplace becomes increasingly crowded. The I-Master solution, combining prepaid, postpaid or postpaid limited credit models, gives providers a crucial advantage by offering a portfolio that includes a flexible combination of service features and robust rating options.

Providers can quickly and easily launch services, manage service bundles and simplify service creation while converging back office and billing operations. I-Master is the only feature-rich, IP based prepaid platform for both IP based or legacy networks that offers the flexibility required to manage every stage of the service cycle from launch to billing management.

I-Master serves as a cornerstone for the entire service portfolio, enabling providers to expand their market in numerous ways. It provides the platform to ensure a provider can offer new converged in-demand services for all account types with the revenue assurance protection to safely cultivate any market.

Refer to the I-Master data sheets for technical specifications at www.verso.com/imaster