sandvine®
Intelligent Broadband Networks

OutReach Experience Manager

A Sandvine Technology Showcase

Contents

Executive Summary

Creating an ongoing relationship with subscribers is an important way for communications service providers (CSPs) to reduce churn. Just as importantly, ongoing engagements provide opportunities to increase revenue.

Sandvine OutReach provides fixed, mobile and converged communications service providers (CSPs) with a single product to build and execute multi-channel sales, marketing and customer care campaigns across more than 20,000 devices.

With OutReach, CSPs can rapidly implement a wide variety of valuable use cases, from notifications and promotions, to process workflows and self-service, to app/content stores, to rich subscriber portals.

These engagement tools and campaigns are all defined within and controlled by the OutReach Experience Manager – the only multi-screen cloud-hosted content management system (CMS) built specifically for communications service providers.

The OutReach Experience Manager provides you with everything you need to build stunning device-specific subscriber interfaces and to manage your multi-channel communications campaigns.

This document explains some of the most important functions and features.

Introduction to Subscriber Engagement

Internet services and end-user devices have been rapidly growing in sophistication, increasing the support costs for operators and leading to frustration for users. The key to containing these costs while providing enhanced customer service was the introduction of self-service systems such as interactive voice response (IVR) and PC-based web portals.

More recently, web-enabled feature phones and the new generation of smartphones have opened up a new channel of communication between operators and subscribers using the same device for self-help that they use every day for their communications.

The widespread adoption of tablets and the introduction of web-connected gaming consoles, smart TVs, and even automobiles, provides communications service providers (CSPs) with additional opportunities to engage with subscribers, but not without overcoming many challenges.

Some CSPs have already heavily invested in customer engagement initiatives, including mobile self-management portals, and have reported positive results, including[1]:

- Subscribers are increasingly adopting mobile self-service as an important channel of interacting with their CSP; this is especially true for smartphone users
- Subscribers are expecting (and even requesting) the option to access and manage their account details while connected via mobile devices, and once they begin to use the self-service interface, they continue to do so
- Surveys show that subscribers who use self-service capabilities have a higher level of satisfaction with customer service
- The number of calls to the customer contact center has been reduced by as much as 20% over a period of 18 months
- The number of transactions to the main self-service portal from mobile users has increased, with mobile traffic representing as much as 30% of total traffic even in 2012 – and this figure is set to grow further
- The introduction of self-service has helped operators achieve at least 18% uplift in average revenue per user (ARPU) by enabling up-selling through a self-service interface

However, without the right tools it is very difficult for a CSP to realize these benefits.

This paper presents Sandvine's OutReach Experience Manager, and explains the features and functions that allow operators to seize the subscriber engagement opportunity.

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[1] These findings are reproduced with permission from the Analysys Mason report *"Mobile self-service: the future of customer engagement"*

The OutReach Experience Manager

The OutReach Experience Manager is the only multi-screen cloud-hosted content management system (CMS) built specifically for communications service providers. It provides you with everything you need to build stunning device-specific subscriber interfaces and to manage your multi-channel communications campaigns; the sections that follow dive into some of the most important functions and features.
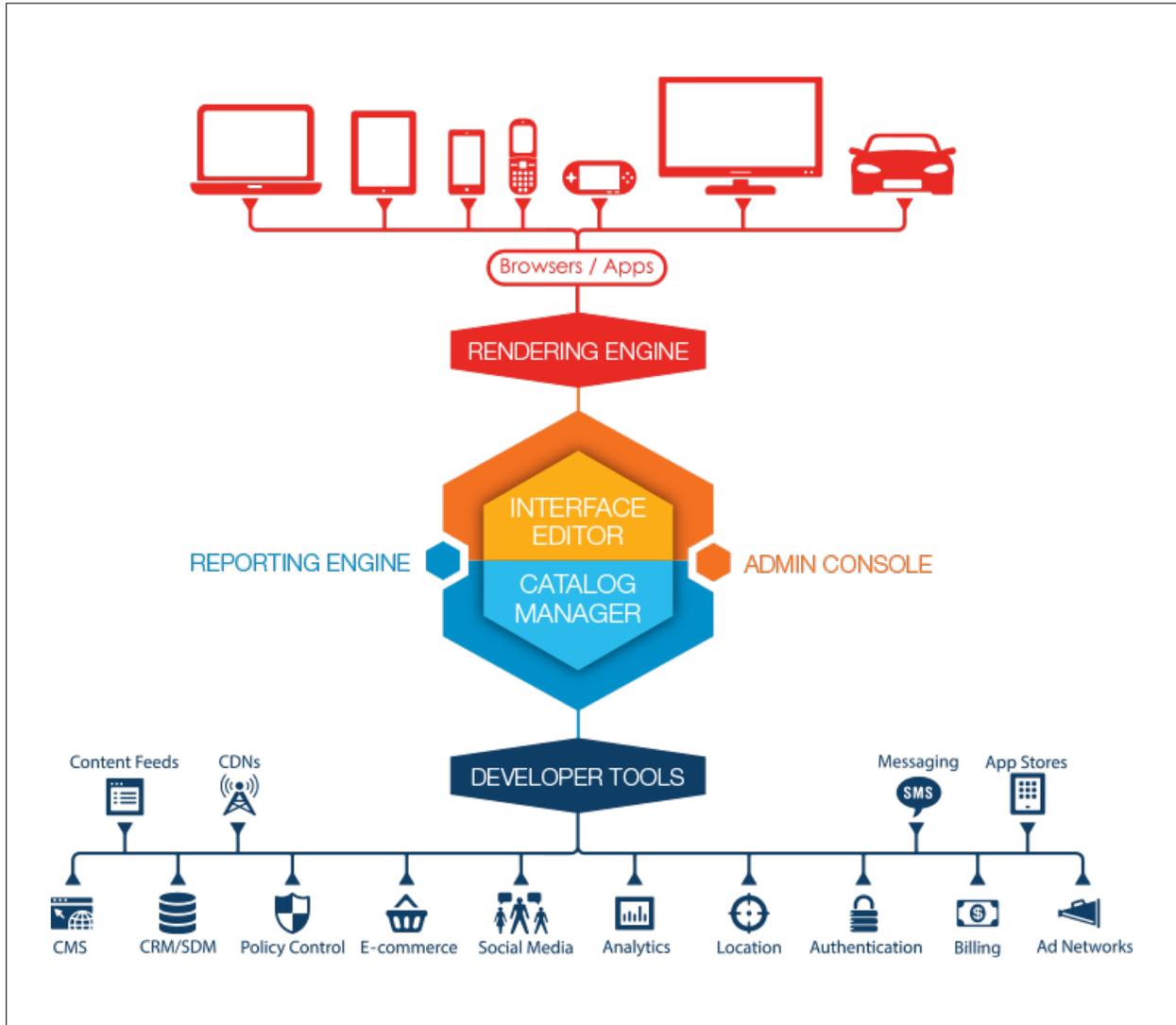

Figure 1 - Functional overview of the OutReach Experience Manager

Interface Editor

The Interface Editor is where you design and craft your subscriber engagement pages, portals, and apps. In addition to elements examined later in this document, the Interface Editor includes a range of functions and characteristics to arm you with everything you need to ensure an optimal subscriber experience with stunning, device type-specific interfaces.

Unlimited Page Creation

The OutReach Experience Manager lets you create as many pages as desired, and pages can be cloned or imported from other OutReach sites to accelerate the creation process.
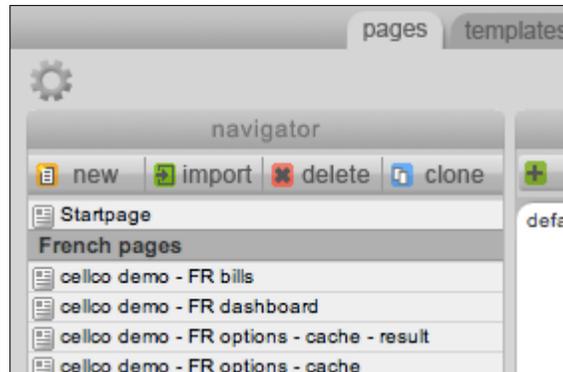
Widgets and Templates

Widgets are components that can be edited, cloned, and re-used across all pages, in order to achieve specific display of static or dynamic content. Each widget, and there are more than 70, comes with a series of basic and advanced options that enable maximum design possibilities.

Groups of widgets can be converted into templates, which can be reused and updated *en masse*; templates are ideal for menus, headers, footers, etc.
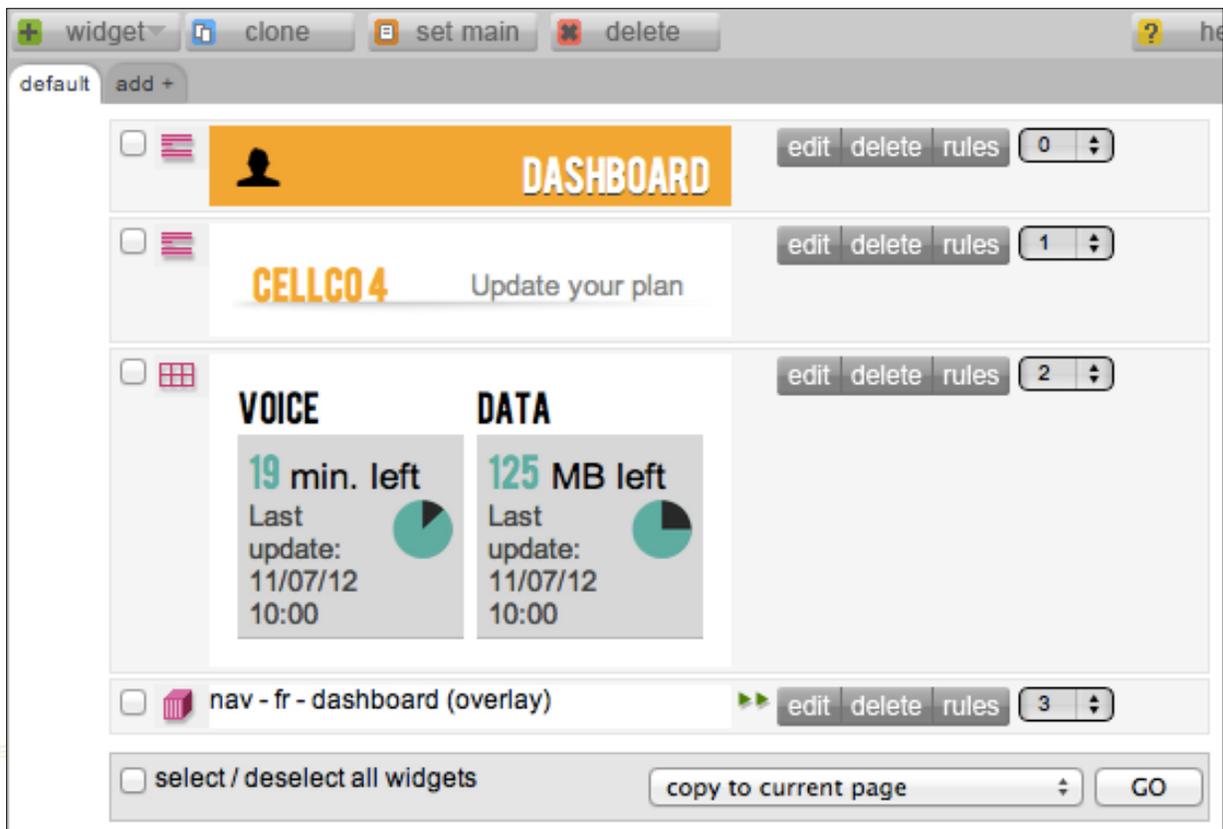

Figure 2 - Widgets and templates speed production and help to ensure consistency across pages

Styles

The Style Manager lets you define colors, fonts, effects, margins, and other styling elements.

Once a style is defined, it can be applied to any page as default, and you can achieve precise designs by applying certain styles only to particular widgets.
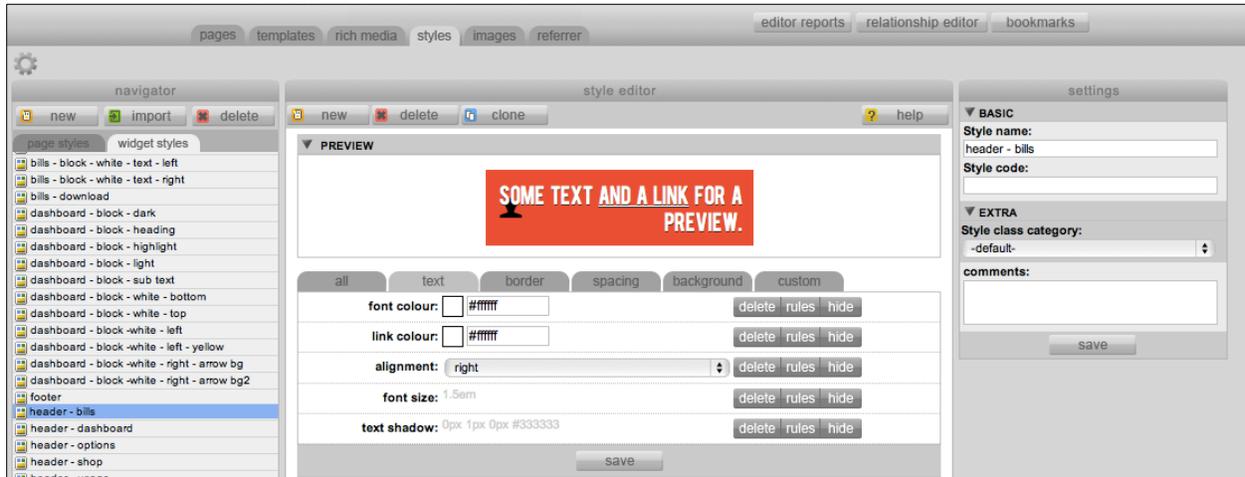

Figure 3 - The Style Manager helps you define the look and feel of your interfaces

Layout Editor

The Layout Editor lets you adapt your interfaces to fit today's multi-screen world using device type-specific layouts, so a single URL is displayed with different page organization tailored to the user's device type (e.g., feature phone, smartphone, tablet, PC, and smart TV).

The Layout Editor lets you add new layouts and define their structures with rows and columns; then, you can use different rules to define which device type and orientation loads what layout.
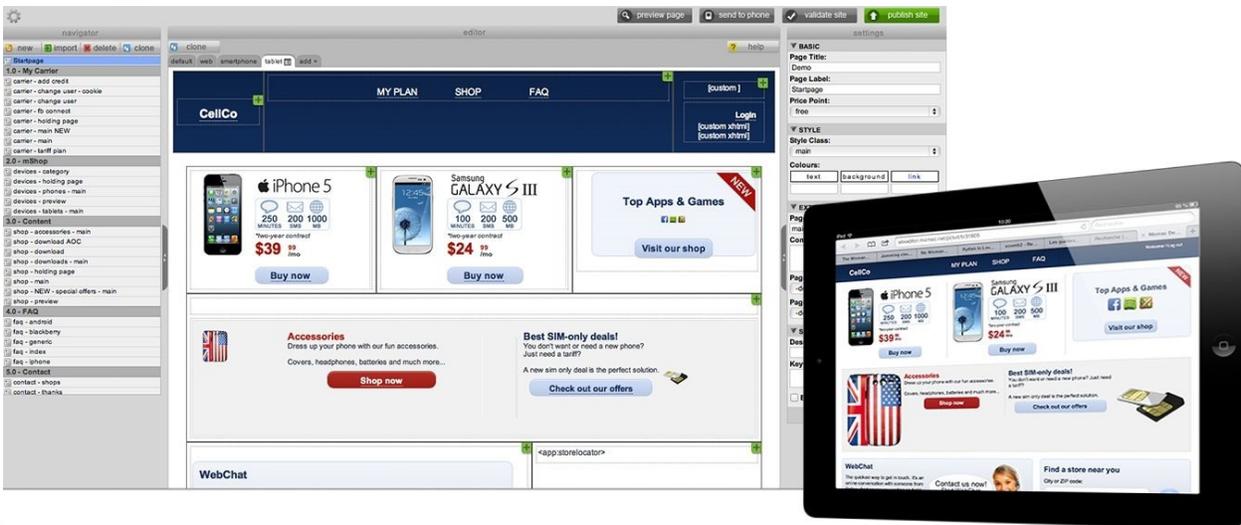

Figure 4 - The Layout Editor design and the actual rendered page

Rendering Engine

Without appropriate rendering, even the best message and content can lose its impact, but many factors must be considered to determine an interface's optimal appearance.

The OutReach Experience Manager transforms interfaces on-the-fly depending on the user device and context; these transformations are achieved with a number of processes, including:

1. Device Detection: The subscriber's device is identified and matched in the device database (which contains more than 20,000 devices). Each device is defined with more than 70 criteria, including screen size, supported HTML versions, video formats, etc.
2. Layout Detection: The device identity also corresponds to a specific device type, such as feature phone, smartphone, tablet, laptop/PC browser, and smart TV. Combined with the device orientation (i.e., landscape or portrait), the appropriate layout can be chosen (see Figure 5).
3. App or Mobile Site: Due to specific parameters, the OutReach Experience Engine detects if the request comes from a browser or a native app.
4. Rules and Context: Before creating the page, the Rendering Engine detects if the site creator has set up specific publishing rules. More than a hundred rules can be set up, including device rules, user profile, CRM, dates and times, session history, location, and more.

Server-side rendering and responsive design deliver unrivaled flexibility for a multi-screen customer experience.
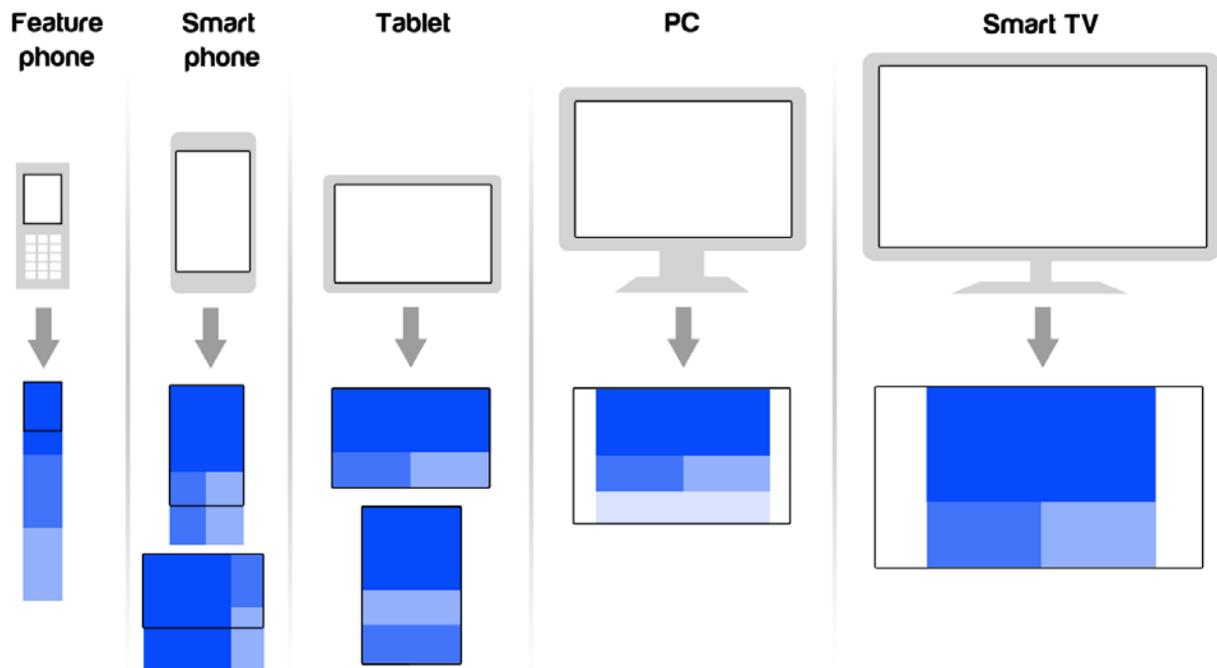

Figure 5 - Examples of variable layouts

Personalization Tools

Personalization takes your communication to the next level and contributes to an ongoing relationship with your subscribers.

The OutReach Experience Manager integrates with many back-end billing and operations support systems (B/OSS) to create a truly personalized experience for your subscribers.

One important personalization tool is a collection of profiling rules. These rules let you manage the display of any widgets, styles, or templates.

Figure 6 - A sample of the available profiling rules

More than one hundred profiling rules are available, covering not only CRM and device capabilities, but also browsing behavior, date- and time-based programming, network type, location, and more.

With these rules, you can precisely control your messages. For instance:

- Display *"Download the iPhone app"* only to iPhone users, only once, and with the correct AppStore URL depending on the subscriber's location
- Display *"Try the new Nexus phone at…"* only for Android non-Nexus users, and directly embed the route to the nearest store
- Detect when the subscriber is on a 3G network in London, show the nearest operator WiFi hotspots, and propose *"See this video in HD using one of these WiFi hotspots"*
- Identify if a user is close to his or her data usage limit and automatically display a corresponding promotion

In addition to profiling rules, fields can be ingested from CRM systems and other business databases and used in your communications to include dynamic, personalized content (Figure 7).

Figure 7 - Integration with CRM and other business systems can be used to personalize dynamic content

In addition to profiling rules and dynamic fields, your subscribers can also personalize their own interfaces. This functionality is achieved by means of active personalization widgets.

Using these widgets, the OutReach Experience Manager operator can craft interface scenarios including personalized dashboards, a "my preferences" zone, and personalized menus.

Figure 8 - Active Personalization Widgets

Native and Hybrid Apps

The OutReach Experience Manager includes an App SDK that gathers a complete set of native components in order to extend hybrid functionalities with native behavior. With this framework, you can find the perfect combination between native and hybrid technologies to deliver the best, most flexible customer experience on apps.

All native components can be controlled from the Interface Manager, such as cache controls, device APIs (e.g., maps, network, user information), and much more.

Once completed, you can distribute your app in the Google Play and Apple iTunes marketplaces.

Hybrid Apps

Hybrid apps offer enormous potential for CSPs who want to evolve the experience to reflect a subscriber's journey through the customer lifecycle.

With hybrid apps, the user installs the app once but dynamic HTML5 content means that you can still control and edit the in-app interface and experience over time without needing to update the app and re-enter the app store review process.

Marketing and Social Plug-Ins

To maximize engagement and revenue, the OutReach Experience Manager includes a number of tools that help you to get discovered and multiply your message.

Search Engine Optimization

These tools help subscribers find your content, and include: automatic creation of mobile sitemaps and enriched HTML headers; enables as many custom domains as desired, so subscribers will only see your brand's domain name regardless of the device being used; deep link redirection means that mobile traffic to a website can be redirected instantly to the mobile equivalent, whether the page is static or dynamic.

Social Tools

Social tools mean that any content or pages can easily be shared on Facebook, Twitter, LinkedIn, or Google+, potentially dramatically increasing your audience and letting you benefit from strong social references.

Additionally, content or pages can also be shared via email or SMS; integrated timelines let you embed specific content provided by social networks to keep pages dynamically up-to-date; OAuth

authenticates Facebook and Twitter users and enables personalization features; and you can interact with your subscribers using comment, voting, rating, feedback, polling, and quiz tools.

Advertising

The OutReach Experience Manager includes an integrated multi-screen ad server to manage, deliver and track campaigns.

Alternatively, connect to your existing third-party ad server, with out-of-the-box support for Google AdSense, DoubleClick, Velti, 24/7 RealMedia, SmartAd Server, OpenX, or Motrocity.

Catalog Manager

Managing dynamic content, including newsfeeds and content catalogs, is a significant challenge for CSPs who want to avoid presenting stale or dated content to subscribers.

The Catalog Manager is a module that maintains interface dynamism by ingesting, manipulating, and rendering content.

A significant problem facing CSPs is the responsiveness of their marketing campaigns within a sales funnel. Specifically, acquiring new customers and encouraging loyal customers to upgrade their device or plan frequently requires complex (and time-consuming) IT processes, interoperability across many systems, and an in-depth view and unfettered access into disparate data silos.

The Catalog Manager is designed to simplify a great deal of this complexity, with the integration of product and service catalogs. This feature enables CSPs not only to showcase their own products and services, but also third-party catalogs (e.g., device accessories, event tickets, etc.).

Figure 9 - An device recommendation

Once integrated, it is possible to create bundles of products and to create recommendations based on other types of content and subscriber interests. All purchasable items and content are accessible through a single interface and can be mixed together to create contextual up-sells.

Within the Catalog Manager is the Download Manager, which gives CSPs the capability to ingest, mix, and distribute any type of downloadable item (e.g., videos, audio samples and complete tracks, apps, images, etc.). Content can be manually uploaded or ingested automatically via FTP or HTTP.

A similar tool is the Link Manager (Figure 10), which lets you create link feeds and categories, in order to create mobile directories and app store recommendations.
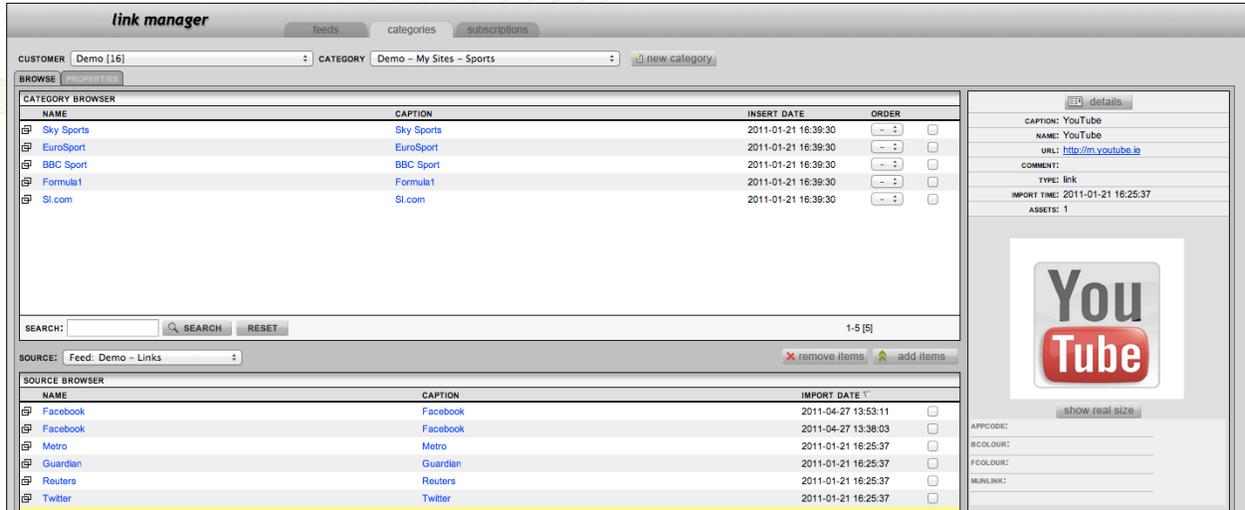
Figure 10 - Link Manager

Reporting Engine

Business intelligence insight lets you modify campaigns based on their performance.

To enable these optimization initiatives, the Reporting Engine aggregates a range of standard key performance indicators (KPIs) and enables custom KPI definition.

To provide maximum utility, the Reporting Engine supports leading third-party campaign analytics tools including Google Analytics, Omniture, XiTi, and WebTrends.

Admin Console

The Admin Console provides centralized management of user roles and permissions, and an audit trail function tracks user activities within the platform.

These features are essential not only for auditing who has been working on which pages, but also for enabling simultaneous multi-user editing.

Site Testing and Validation

Each site instance comes with a testing URL and a production URL. The production URL is mapped with the client (i.e., your) domain name.

To quickly check the look and feel of your designs, all modifications made by the site editor can be previewed in the device simulator (perfect for feature phones), and a "send to phone" button sends a page link via SMS to your smartphone.

The user can also run a complete analysis using the "validate site" feature, in order to detect empty pages, dead links, incorrect style elements, and to alert on heavy pages. When all modifications are complete, simply push the "publish site" button and the updated version goes live.

Figure 11 - Testing and validation tools

Developer Tools

In addition to the features already presented, the OutReach Experience Manager includes other tools for web developers who want to take their designs to the next level, including:

- Custom Pages and Layouts: create highly complex interfaces that are automatically compatible with multi-screen rendering
- API Broker: power personalized dashboards, self-care front-ends, authentication, permission-based content, and subscriber profile-specific rules by integrating with your existing CRM and B/OSS APIs
- App SDK: expands the portal presence into App Stores (e.g., iTunes, Play, etc.) with exclusive native and hybrid app functionality; gather a complete set of native components to extend hybrid functionalities with native behavior, in order to deliver the best and most flexible customer app experience; all native components can be controlled from the Interface Manager, such as cache controls, device APIs (e.g., maps, network, user ID, etc.)

APIs and Interfaces

APIs and interfaces let you connect the OutReach Experience Manager to other business systems and third-party services, to interact with and receive data from these systems.

A comprehensive list of supported APIs and interfaces is included in the OutReach documentation, but Table 1 shows some of the most commonly requested items.

Table 1 - APIs and Interfaces

Connection/Transfer Protocols	FTP/SFTP, HTTP/HTTPS with or without persistent connection, NNTP, UCP, Diameter
Data Protocols	SOAP/WDSL, XML RPC, REST, MM7, UCP, Diameter, custom XML, native RDBMS integration with SQL Server and Oracle, JSON, Java RMI
Billing Interfaces	Diameter, mPay, Payfoit, W-HA, XTC, SAG, SOA, CCA, SMPP, iMode, IPX, Netsize, Parlay/X (OneAPI)
Third-Party Services	Google Ajax Search API, OpenX, Google Custom Search Engine, Google Static Maps API, AdMob API, and more

Conclusions

The OutReach Experience Manager provides communications service providers with everything needed to build stunning device-specific subscriber interfaces and to manage multi-channel communications campaigns.
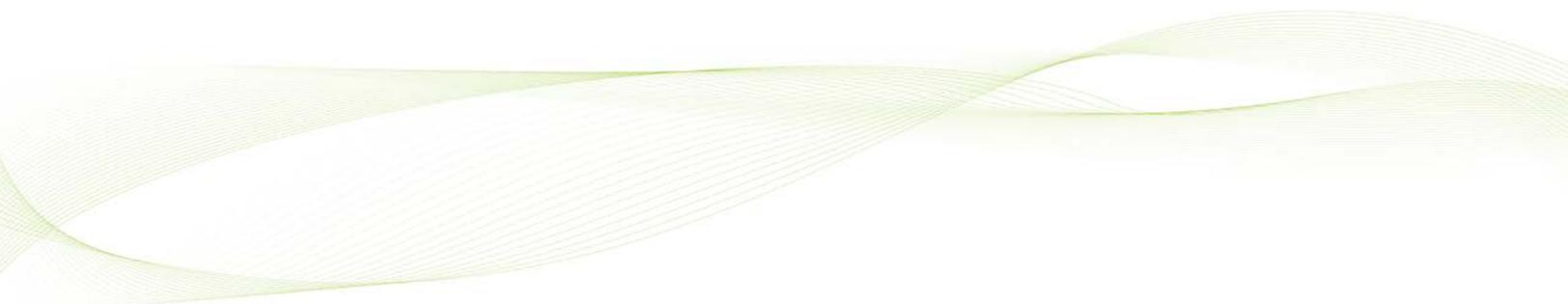
Table 2 – Summary of key features

Key Feature	Explanation
Interface Editor	Ensure an optimal subscriber experience with stunning, device type-specific interfaces
Rendering Engine	Adaptive rendering to create exciting front-ends on practically any subscriber device, old or new
Personalization	Deliver a truly personalized subscriber experience
Unique App Capabilities	Take advantage of a powerful combination of native and hybrid app functionality
Marketing and Social Plug-Ins	Get discovered and multiply your message
Catalog Manager	Ingest, manipulate, and render dynamic content to create shopping and portal content flows
Reporting Engine	Gain visibility into campaign performance
Admin Console	Provides centralized management of user roles and permissions; maintains an audit trail
Site Testing and Validation	Vital tools to test and validate your sites
Developer Tools	Tools for web developers who want to take designs to the next level
APIs and Interfaces	Connect the OutReach Experience Manager to other business systems and third-party services

Invitation to Provide Feedback

Thank you for taking the time to read this technology showcase. We hope that you found it useful, and that it helped you understand some of the features of the OutReach Experience Manager.

If you have any feedback or have questions that have gone unanswered, please send a note to whitepapers@sandvine.com