

The Internet is connecting advertisers and marketers to customers from Alaska to Australia with text, interactive graphics, video, and audio. Internet advertising exceeded \$17 billion in 2005. It has now surpassed billboards, magazines, and cable in spending. On its current growth path, it will pass radio advertising in less than two years. The Interactive Advertising Bureau (IAB) has pointed to this growth as proof the Web, in addition to being a call-to-action medium, has come into its own as a branding medium.

Local advertising is the fastest-growing portion of the online market, and since 2000 it has enjoyed a compound annual growth rate of 23.1 percent. In 2005, growth skyrocketed to 51.5 percent - and that growth may be just the beginning. Even at \$4.1 billion for 2005, local online advertising represents only 3.1 percent of the nearly \$130 billion that local businesses spend on all media advertising. The table below gives details about the large portals supporting local listings.

Problem:

Local listings on Web sites are difficult to manage for quick time to market and maximum flexibility.

Solution:

Advertisers need a tool, based on the taxonomy definition and rules, to manage local listings on a Web site.

Benefits:

The ROI will increase exponentially with the number of local listings sold annually as operations costs go down.

	Google Local	Yahoo! Local	Super Pages	CitySearch
Listing Data Source	Feeds from Internet Yellow Pages and direct submission	Info USA and direct submission	Axiom and direct submission	Direct Submission
Monthly Unique Visitors	75,915,000	26,171,000	14,507,000	5,661,000
Cost of Basic Listing	Free	Free	Free	Pay per click (\$.75 per click, \$2.50 per call)
Enhanced Listing or Sponsorship	Not currently available	\$9.95/month (\$120/year)	\$22.00/month (\$264/year)	Targeted profile sponsorships
Other Advertising Opportunities	Ad words PPC (Varies, min \$.10/click)	Overture PPC (Varies, min \$.10/click)	Pay per click option (Varies, min \$.20/click) Enhancements (color, highlight) \$16-\$22/month. Web site	Banners, e-mail

Source: Comscore April 2005, XenStat internal traffic reports, online media kits

With the demand from advertisers to put their listings on Web sites, the organizations and people managing these Web sites are facing challenges to

- ❖ Put up the listings in minimal time so operations people don't get behind in the requests,
- ❖ Provide the advertisers the flexibility to select which listings show up at different placements on the Web site and
- ❖ Define and create new placements on the Web site faster and easier, based on the traffic to a specific page(s).

Solution

One solution is a tool for vendors or advertisers to manage their own listings on the Web site. The key factors for this solution to work are 1.) The Web site should follow taxonomy in categorizing and displaying the appropriate content, and 2.) The tool should be configured so that the placement information is based on the taxonomy.

The critical success factors in implementing the tool are time to market, flexibility, and return on investment.

Time to market

Objective: Fast time to market enhances the tool's ability to succeed. The ease of creation of new real estate on a Web site and the ability to display the listing quickly will bring in clients to post their listings.

Implications: The solution needs to identify the functionality that can be handled by existing technologies and application functionality and what new technologies and application functionality are needed.

Flexibility

Objective: The tool should be flexible enough to handle current functionality and interfaces as well as to adapt to future states.

Implications: Business logic should be encapsulated into service components residing on the application server tier. These service components should be designed as flexible containers that can easily adapt to interface with external systems. Wherever possible, these components should be standards-based components, as long as there is no significant impact to the time-to-market goal.

Return on investment

Objective: The tool should demonstrate the return on investment when measured against the manual process.

Implications: By allowing the advertisers to manage their listings, the operations cost goes down and the ROI increases exponentially with the volume of listings sold.

The following terms are used to present the concept and solution of managing local listings.

Advertiser or Vendor: refers to a person or company that would like to promote a product or service through the Web site. Advertising agencies acting on behalf of clients are included here.

Category: defines the grouping of vendor services within the local listing sections (for example, photographer, reception site, or caterer). The complete category list should be determined from the taxonomy of the Web site.

Listing: provides profile information for an advertiser as well as the personalized message. The required profile information will vary depending on the advertiser's category. For instance, a capacity property will apply to a reception site but not to a photographer.

Property: is the facets that describe each listing category.

Feature: is an up-sell item, such as a gallery or special offers.

Placement: is a physical location on a page of a Web site. The placement definition can follow the site taxonomy with a root node that can be the name of the Web site itself.

Product (Template): is the combination of a listing along with any properties or features associated with it.

The solution should consist of at least five components, including account management, listing management, template management, and placement engine with a scheduler and e-commerce functions as well as enterprise integrations to corporate security (maybe LDAP), finance and accounting, and customer relationship management (CRM) applications. Each component will use a common rules engine, which can be configured for each business or organization.

Account management

Account management is an important component of this application for administration of advertiser accounts. Accounts can directly interface with other enterprise applications for billing and customer relationship management, using the common interfaces for account or user profiles, billing information, etc.

This module helps the administrative staff to set the access rights at different levels to control and monitor the process that advertisers perform to create and manage their listings. Optional modules can manage the sales, products hierarchy, and markets, and can be extended to build a sales force compensation application.

For users, billing and payment scheduling is important to easily checkout and get their listings on the site with short turn-around time. Users should be able to schedule recurring payments with their listings schedule by entering their payment information (for example, credit card information). Before displaying the listings, the component needs proper checks and validations to make sure the payments are made, which includes both manual checks through an administration interface and programmatic ones based on a message from the financial system after the payments are processed.

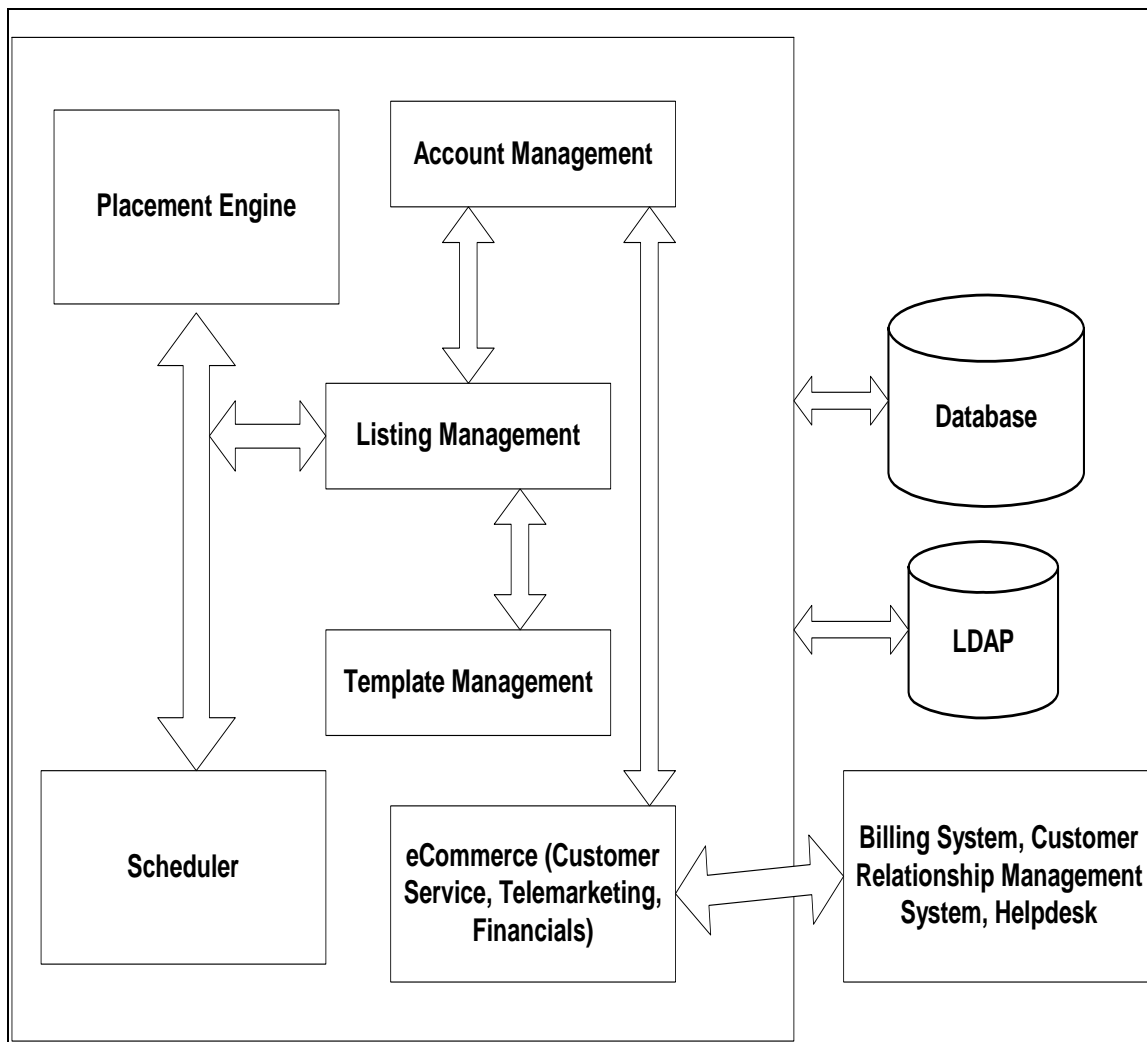


Figure I: Solution Overview Diagram with Components and Interfaces

Inventory management

Inventory is the list of active placements on a Web site and the quantity of allowable listings at each placement. This information controls the process of allocation and scheduling by tracking the product's placement start and end date, along with placement availability. This module can be extended and customized to a specific requirement.

Shopping cart and checkout module

To provide the best experience to advertisers and agencies, shopping cart functionality is important for purchasing and managing orders. With the shopping cart, the advertisers or vendors can place and manage orders to buy placements, listings, and other featured items. The shopping cart will also enhance the inventory management features allowing the user to soft allocate items.

Template or product management

The product management module allows an advertising group to create new, and manage existing, products and properties as well as to control their availability by activation or deactivation, and to define pricing rules. This component also lets the group create the taxonomy and placement definitions based on the taxonomy.

Properties and features

Properties are the facets that describe each listing category. Using these properties effectively will give exposure and value for the advertisers who buy placements on a Web site. These properties can be as simple as tags attached to the listings or to media features like photo galleries, videos, or special offers. These properties can include up-sell items for the listing, giving it a premium value.

As part of property management, a property or feature may be added or removed from a product definition. Each organization can set its own business rules to manage these properties, such as

- When a new property or feature is added to a product definition, it will appear as an option for existing product owners when they edit their product.
- When a property or feature is removed from a product definition, the configuration of all active products will not change until the product expires.

Another important aspect of a product is price. Pricing can be defined at product, property, or feature level, relative to a placement on the Web site. Defining the price at product or template level means changes can be applied across the board. These rules can be changed as part of the product management interface. Here are examples of rules:

- When a price is modified, it is immediately reflected for all newly created products.
- The price change will not affect existing products until the contract expires and is renewed.

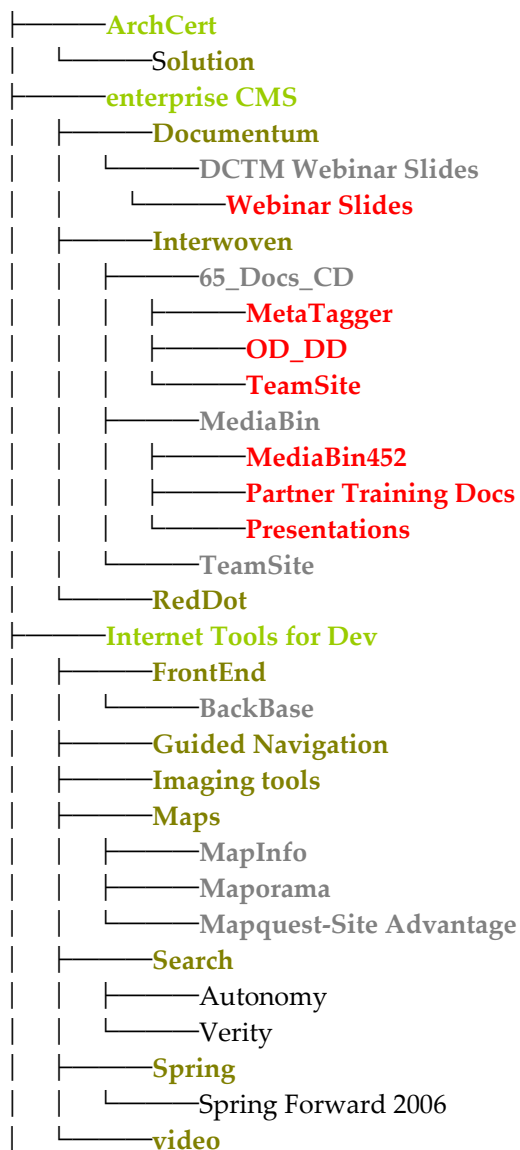
A price can be defined by the attributes and endpoint selected for a listing, feature, or placement. This framework allows businesses to adjust pricing by creating additional endpoints and endpoint attributes. The system can support the pricing definitions at any node of the taxonomy.

Placement definition using site taxonomy

A site's taxonomy is the way it organizes its data into categories and subcategories, sometimes displayed in a site map. Taxonomy is recommended by content strategists to make the site more organized and appealing to the users in conveying its message and intent. The taxonomy can be used effectively to define placements because it follows a hierarchical representation of the site, providing them with a more meaningful structure and an easily understandable name.

Example:

A Web site 'www.younameit.com' can have the taxonomy defined as follows.



For the above taxonomy of the site, the placement definition could be any hierarchical path with any node in the tree as an end point. A few definitions could be,

- *younameit.enterpriseCMS.RedDot*
- *younameit.InternetToolsforDev.Search.Autonomy*

There could be multiple placements on one page, each with unique end point definitions, behaviors, and inventory details. A last node can be added to the above definition with extensions such as these:

- *younameit.InternetToolsforDev.Search.Autonomy.endPoint1*,
- *younameit.InternetToolsforDev.Search.Autonomy.endPoint2*, etc.

Listing management

Listing management facilitates creation, activation, and deactivation of listings. It also facilitates use of the shopping cart and the ability to make soft allocations. It must be easy to use in order for advertisers to successfully adopt the tool. This component should also allow the user to schedule payments based on the scheduled listings and placements.

The function to create and manage listings lets advertisers select a product template and customize the information they wish to let their potential customers know about. To further enhance the appeal and value of their listings, they can add up-sell features like a photo gallery, video, audio clip, and any special offers they are running. These features can be individually scheduled as long as the listing is scheduled.

Scheduler and placement engine

The scheduler and placement engines are really the meat of the application with the most complex and intelligent rules for scheduling and retrieving associated placements. These two components complement each other. The scheduler looks into the listing schedule along with its individually scheduled features while the placement engine traverses the taxonomy to find the physical location on a specific page and queries and retrieves all the listings for that placement. The schedule has all the information about a listing, its features and placement, start dates, end dates, payment status, and listing status. It can be used to check or provide availability information before allowing an advertiser to schedule a listing. The payment status is maintained and updated by the financial system based on the successful processing of the scheduled payments associated with the listing. The schedule has to be very flexible to accommodate listings that are scheduled continuously, those in random periods of each calendar month or year, a single listing to be scheduled to multiple placements with different schedules, and more.

Enterprise integrations

As shown in the figure above, the tool must integrate with at least a few enterprise applications, such as corporate finance and accounting systems, CRM applications, and, for security, LDAP or active directories. A separate module containing the adapter interfaces to all these applications can be built as an external layer that will be exposed to the account management

component. This module automates all the processes around purchasing listings and placements for an advertiser, which increases the ROI and the vendor satisfaction.

The marketing group should be able to send out campaign e-mails based on schedule information to advertisers providing them with any special offers, discounts for specific placements, and availability notifications. The CRM software can be integrated with this tool to implement the marketing campaigns.

Workflow

Workflow ties all these pieces together and can be different based on the type of actor using the tool. For example, the internal operations team may have one sequence of flow while an advertiser who directly manages the listings can have a different one. The front-end tool can be configured and customized based on the experience of the user.

Conclusion

With online advertising demand growing rapidly and local advertising growing even faster, the need to provide competitive services to advertisers becomes imperative. There are lots of advertisements serving companies like DoubleClick, ValueClick, Atlas, etc., but in this space there aren't many tools available to manage local listings. Though local management doesn't have any standards around it, this paper proposes one way to manage them effectively and easily. This tool can be commoditized by keeping the rules engine for scheduling and placement algorithms configurable and flexible. As demand for local listings increases, this tool will save the publishers significant dollars in operations cost apart from providing the competitive edge in putting the listings up on the Web sites in quick time.

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About the Author



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