



# THE COMPUTERWORLD HONORS PROGRAM

## CASE STUDY

LOCATION:  
*Dublin, California,  
United States*

YEAR:  
*2006*

STATUS:  
*Laureate*

CATEGORY:  
*Business and Related Services*

NOMINATING COMPANY:  
*Juniper Networks*

### ORGANIZATION:

*Sybase iAnywhere*

### PROJECT NAME:

*AvantGo*

### Summary

AvantGo is a free service provided by Sybase iAnywhere that delivers rich, personalized mobile Websites to PDAs and Smartphones. More than 7 Million unique users subscribe to the service, selecting channels to deliver such information as travel guides, weather, sports and news. Hundreds of major brands, including American Airlines, BMW, CNET, HP, Microsoft, Rolling Stone and The New York Times, leverage AvantGo to target a highly desirable demographic of tech-savvy business professionals. In order to ensure that information moves rapidly and efficiently from where it is stored to where it is needed, infrastructure, including Juniper Networks' routers and firewalls is critical.

### Introductory Overview

Today, if you are out of touch you are out of business. Users expect a wide variety of connectivity options, be it the PC, cell phone, or PDA. No longer does the workday end at 5 P.M., and no longer do casual users accept any downtime from clients, stakeholders or even retail establishments.

One of the keys to AvantGo's success has been its ability to stay ahead of the competition by delivering the most advanced mobile Internet technology to its users. Driving these technological advances is the service's commitment to providing its users with easy access to the kind of information they need, anywhere, anytime.

### Benefits

AvantGo allows users to synchronize mobile versions (called "channels") of any favorite websites to a Smartphone or PDA. AvantGo offers thousands of channels from the world's leading brands in news, weather, sports and more. AvantGo can be used to sync any Web site (family site, workout schedule, etc.) to a device. AvantGo also provides convenient mobile access to personal travel itineraries from leading airlines and travel services -- plus city guides, weather, maps and directions. Users can also get the latest RSS feeds offered by bloggers and major media. RSS feeds are delivered to a device in a format that is optimized for a small screen Smart-



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phone or PDA. It has become an indispensable tool for professionals committed to living up to high expectations at the office as well as individuals wanting to stay in touch, or know the score, when they are on the go.

For marketers, advertisers and media, AvantGo offers an unparalleled opportunity to influence and interact with high-income trendsetters, right in the palms of their hands. With an average of five times the click-through rate of typical Web banners and superior retention and conversion rates, AvantGo accesses a hard-to-reach audience of young, educated, tech-savvy business professionals. Conversion rates of 10-20% are far above the industry average.

AvantGo is based on the iAnywhere M-Business Anywhere platform. The same mobile platform is being used by enterprises worldwide to deliver Web-based content and applications to mobile devices. Deployment is rapid, cost effective and requires minimal recoding.

### The Importance of Technology

The AvantGo mobile Internet service supports more than one million device syncs to its active user base per day, so the infrastructure must be reliable and scalable. AvantGo leverages a distributed computing model to service its fast-growing user community. As the user community grows and the number of simultaneous synchronizations increases, the AvantGo server software can be distributed onto multiple machines. The primary server uses the HTTP protocol to communicate between its own internal Sync Server, UI Server, and database, with the entire software system run through a load balancer for greater efficiency. In addition, automatic rollover and failover processes ensure data and application integrity, regardless of how many users and devices access the service simultaneously.

- Multi-mode capability - AvantGo subscribers can access the service by syncing their device via their notebook or desktop computer, then viewing the content in offline mode, or by connecting to a wireless or Wi-Fi network to surf content and applications in real-time. Both modes enable users to receive content that AvantGo downloads to them - either via sync or real-time, wireless connections. Each of AvantGo's connectivity modes provide distinct advantages:
  - Sync: When users view synched content, they benefit from fast response times, reliable access to data (no drop-offs), easy access from any location (even from areas without wireless service), and no airtime fees.
  - Wireless: Wireless connectivity gives users real-time information updates and transactions, and they can issue ad-hoc queries to websites and Web-based applications. Support includes 802.11b Wi-Fi and Bluetooth connection modes, as well as cellular networks.
- Cross-platform performance - AvantGo enables marketing and media organizations to develop mobile Web content once, then deploy that content to multiple devices simultaneously. AvantGo supports all of the major industry platforms and networks, including:
  - Platforms: Microsoft Pocket PC, Palm OS (Sony and Palm), Symbian, Windows Mobile 5.0.
  - Networks: CDMA, GSM, CDPD, GPRS, 3G
- Open Standards Support - The AvantGo service leverages open Web industry standards in its design and interfaces, so marketing and media clients can maximize the value of their Web investments by leveraging standard Web tools to create and deploy mobile websites. AvantGo's



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open standards support includes:

- On-device dynamic presentation - AvantGo's latest browser\* includes support for DHTML, HTML 4.01, XHTML 1.0 and CSS 1.0 Style Attribute for user interface components
- On-device data - Includes support for XML data synchronization to device plus cross-platform JavaScript API
- On-device logic - Includes support for JavaScript and Document Object Model (DOM) to control presentation and access to data
- Security standards, including support for end-to-end SSL

Within AvantGo's vast technological infrastructure, routers play a vital role in ensuring that information moves rapidly and efficiently from where it is stored to where it is needed. Since installing Juniper Networks routers and firewalls, the AvantGo IT team has noted significant improvements in the stability and reliability of its communications network.

### Originality

More than six years ago, AvantGo became the first service to deliver optimized mobile Web sites to handheld users. Today AvantGo continues to be the de facto leader for advertisers looking to use a visually rich medium to reach a vast, highly targeted, mobile audience. Unlike other mobile Internet services, AvantGo's system remains free, is versatile and uses technology that keeps it ahead of the curve and always strives for extreme ease of use.

Delivering more than one million syncs per day, the AvantGo service leverages a patented Dynamic Mobility Model architecture that ensures the service performs across multiple platforms (Windows CE, Palm OS, Symbian), sync modes (cradle, Wi-Fi, Bluetooth), wireless networks (CDMA, GSM, CDPD, GPRS, 3G) and devices (Sony, Dell, Toshiba, PalmOne, Nokia, HP/Compaq) — seamlessly for millions of users.

AvantGo's advanced architecture enables seamless transitions between connection modes, so that users can get their mobile websites through syncing, wireless surfing, or a combination of both, depending on their needs.

- Only AvantGo enables marketing and media organizations to develop mobile Web content once, then deploy that content to multiple devices simultaneously. AvantGo supports all of the major industry platforms and networks, including:
  - Platforms: Microsoft Pocket PC, Palm OS (Sony and Palm), Symbian, Windows Mobile 5.0.
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### Success

To enhance its service for business travelers, American Airlines wanted to make essential travel information such as ticketing data and flight schedules easily available as downloadable information for PDAs, while linking that information to fare promotions and other marketing campaigns. After evaluating several alternatives, they decided to create an exclusive American Airlines "channel" with the AvantGo mobile internet service.

"For customers who rely on their Smartphones or PDA as an information resource, AvantGo



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is a great way to receive flight schedules and the latest Net SAAver fare offers, access Admirals Club locations, and tap into the important contact numbers while traveling,” said Rob Britton, Managing Director of Advertising for American Airlines.

In just six years, starting at zero, we have grown as follows:

User base 7.4 million

Content 1,100 channels

Advertisers 250 brands

AvantGo’s mobile advertising services deliver millions of high click-thru impressions and capture qualified leads from its unique demographic of high-income mobile business professionals. Marketers use AvantGo to acquire and retain new customers, build brand awareness and loyalty, and run targeted direct promotional campaigns through its mobile marketing services. Media partners use AvantGo to acquire new subscribers, build new revenue streams, and extend their brand and content to existing users easily and efficiently through the company’s mobile media services.

In January 2006, the analyst firm IDC recognized Sybase and its iAnywhere subsidiary, the parent companies of AvantGo, as the leader in mobile device management enterprise software with higher revenues and market share in a top 10 list that makes up more than three-fourths of the market and is dominated by large systems management vendors. Tens of millions of mobile devices, millions of subscribers, and 20,000 customers and partners rely on AvantGo’s parent, iAnywhere’s, always-available technologies.

### Difficulty

One of the keys to the AvantGo’s prolonged success has been its ability to stay ahead of its competition in a crowded field by delivering the most advanced mobile Internet technology to its customers. Driving these technological advances is the service’s commitment to providing its customers with easy access to the kind of information they need, anywhere, anytime.

Within AvantGo’s vast technological infrastructure, routers play a vital role in ensuring that information moves rapidly and efficiently from where it is stored to where it is needed. So when their original router boxes began to reset themselves automatically whenever throughput demands increased, the AvantGo IT team had to act quickly to resolve the problem. Although the router manufacturer provided numerous stopgap code fixes in an attempt to resolve the problem, it became evident that the AvantGo infrastructure required a more practical, reliable and stable solution. Recognizing this and moving forward with the Juniper Networks routers and firewalls was the key element in overcoming this challenge.

The most frequent objection we faced was that we were disrupting the current business model. AvantGo is a free consumer service, which is significantly different from Sybase’s traditional enterprise license software business. AvantGo offers our sophisticated mobile synchronization and application framework to consumers for free and is funded by advertisements in the service. Consequently, we got a lot of push back when we submitted investment requests for hardware, software, people and marketing programs. We were viewed as violating Sybase’s existing software license business model. This resulted in a lot of internal conflict. We overcame this obstacle by sitting down with internal groups to educate them regarding how our business



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model was a new way to use our existing mobile software to reach a new market with a new distribution channel. In this way we became one of the first Software-as-a-Service businesses. We continue to build on this model to distribute new software-based services to the consumer market.