WHITE PAPER

Surviving, and Thriving, in the Darwinian Triple-Play Market

New Services and Proper Network Resources Will Determine Value Chain Position

Visionael

I. Razors, Blades and the Rapidly Evolving Triple Play Market

The "razors and blades" business model is a fixture in any Marketing 101 course, presented as a sure-fire path to an ongoing revenue stream: A company sells the consumer a razor that must be continually replenished with a new supply of blades, throughout the life of the product. Ongoing revenue can be assured as consumers purchase new blades for razors, which evolve over time into more sophisticated models with new features, requiring the purchase of ever more expensive, higher-performance blades.

Until recently, the two main types of carriers in the triple-play communications market—telecommunications providers and cable operators—have enjoyed their own versions of this lucrative business model. Each industry's competitive playing field was oligopolistic, with relatively few providers vying for a growing number of customers wanting to purchase voice, high-speed Internet and television services from a single company. The triple-play market has been especially profitable because its "razor"—the wireline or cable connection—itself delivers an ongoing monthly revenue stream, in addition to the "blades"—monthly services such as voice over IP (VoIP), premium cable channels and video on demand (VOD)—which also produce recurring, predictable revenue.

Triple-play providers' recurring revenue base is eroding

However, an absolute maelstrom of change across the triple play arena, complete with new competition from wireless providers, is rapidly replacing "razors and blades" with a much more challenging business model. In the very near future, monthly fees for basic access ("razors") will likely disappear, coupled with increased competition from content providers wanting to deliver their wares directly to consumers. This creates a harsh Darwinian reality for both wireline and wireless companies, and triple-play providers in particular: to either move up the value chain by delivering unique new services (better "blades"), or watch their revenues erode into extinction.

As a result, the pressure is on triple-play providers to deliver exceptional service levels for basic offerings, as well as value-added products such as premium VOD content, linkages between mobile phones and cable systems, and other advanced capabilities. To achieve this, the vast network infrastructure that transports triple-play services must perform optimally, to ensure exceptional service delivery and high levels of customer satisfaction.

Network asset management plays a critical role in survival

Network resource management—known as network asset management in its advanced form—plays a similarly critical role in enabling triple-play providers to pursue opportunity in the near- and long-term. In simple terms, network resource management is used in broadband networks to keep track of the way link resources are allocated to connections. The two primary resources these systems tracks are capacity (bandwidth) and connection identifiers. Network resource management systems monitor network capacity and control the allocation of capacity to connections when requested.[1] Network asset management goes beyond this tactical, reactive orientation to offer both a high-level, strategic view of network resources and an extremely granular view into the smallest components of network inventory.

Network asset management is essential because if a network's capabilities are not known at both global and granular levels, triple-play providers will by default engage in a dangerous guessing game—exactly what can the network handle? In a high-stakes market that forces providers to deliver no-cost basic service and flawlessly executed premium offerings, providers cannot risk overestimating their networks' capabilities.

This white paper examines several major competitive developments that point toward the extinction of monthly fees for basic services, the frenzied development of value-added services as providers search for stable new revenue streams, and the merging of wireline and wireless services in the ongoing evolution of the triple-play market. It also discusses the critical role played

[1] Definition adapted from en.wikipedia.org.

by network asset management solutions such as Visionael® Network Resource Manager (NRM) in allowing triple-play providers to pursue opportunity in the near- and long-term.

II. Revenue Erosion: The Disappearance of Monthly Service Fees

With mobile phones having been part of mainstream consumer technology for more than a decade, many Americans have all but dispensed with landlines; they may retain a landline for emergency use, but the telephone of choice is the mobile phone. Today, six percent of U.S. households have no landline altogether and gone wireless only, according to the CTIA, the wireless industry association. The consulting firm In-Stat predicts that by 2009, one-third of all mobile subscribers will use them as their primary phone. This reality has two consequences:

- Literally and figuratively, fewer consumers have in place a connection with a provider that can blossom into a triple-play relationship. To reach the tech-savvy consumers who communicate via wireless only, triple play telecommunications providers must market harder. They need to deliver their message to potential customers who may have an established relationship with their cable, and therefore potential triple-play, provider.
- Revenue erosion for telecommunications companies has begun and will rapidly increase. It is driven by a combination of fewer customers, the proliferation of wireless plans that include free long-distance minutes, increasing competition from resellers and new competition such as VoIP from cable operators. Nearly four percent of U.S. households subscribe to a VoIP service, according to industry estimates.[2]
- Rates for long-distance telephone service, once the largest component of consumers' bills, have declined steadily since the court-ordered breakup of AT&T in 1984. AT&T reduced rates by nearly 40 percent over the next six years. The Telecommunications Act of 1996 ushered in more landline competition and lower rates. Today, many traditional landline long-distance plans now cost less than three cents a minute for interstate calls.

DSL rates plummet, as well

Rate-cutting is not confined to long-distance service, by any means. Monthly fees for high-speed Internet access, the core of telcos' triple-play offerings, are also heading south as providers aggressively woo potential customers. For example, AT&T (formed in 2005 from the merger of AT&T and SBC Communications) recently cut the price of its high-speed Internet service to its lowest level, $12.99 for the first 12 months. This is the first time a Baby Bell has offered DSL for less than the $15 mark. The monthly rate, which requires a one-year contract, increases to $29.99 after the promotional period.[3] In August 2005, Verizon Communications Inc. unveiled a $14.99 DSL service, but with a slower connection speed.

These price cuts have helped the phone companies take a higher share of new broadband customers away from the cable companies. In the fourth quarter of 2005, AT&T added 425,000 net new customers, Verizon added 613,000, and BellSouth Corp. added 204,000. AT&T also has been aggressive in pushing new customers to sign up through its automated Web site, which lowers the costs of acquiring new customers. AT&T has said that it expects increased margins through a combination of the lower customer acquisition costs and the potential of bundled services[4]—a common theme in today's triple-play environment.

The newest customer connection: Fiber to the home

But perhaps the boldest move in the face of declining revenues from traditional wireline connections and basic services is Verizon's multi-billion investment in a new fiber-optic network that will carry television, high-speed Internet and traditional telephone service. This twist on triple-play, called FiOS, is expected to give consumers far greater bandwidth than Verizon's main competitors now offer. It has also helped drag the company's

[2] "Tough call: Long-distance options many and varied," Jeff Smith, Rocky Mountain News, February 20, 2006.

[3] "AT&T Cuts High-Speed Internet Price: First Baby Bell to Offer DSL Service Under $15," Dow Jones Newswires, February 2, 2006February 20, 2006.

[4] *Ibid.*

stock down by more than 10 percent over the past year and influenced Moody Investors Service's and Standard and Poor's Corp.'s recent decisions to downgrade Verizon's debt.

Analysts are particularly worried about the company's spending on FiOS as Verizon's traditional local phone business shrinks—it lost nearly 3.5 million lines last year alone—in the face of competition from cable, wireless and Internet phone providers. But company officials say the line losses are easily offset by growth from Verizon Wireless Inc., high-speed Internet and long-distance service.

"When it's all said and done, the growth opportunity here will be far greater than anybody is accepting at this point," Verizon chairman and CEO Ivan Seidenberg said, suggesting that Verizon's fiber-optics project could someday allow people to consult their doctors by video link, to telecommute in numbers large enough to reduce global warming and to enjoy services not yet dreamed up. "Even 20 years ago, people never saw the full capability of wireless, but yet there were people in the industry, some of us... who believed that this was going to change behavior, and you know what, [we] were right."[5]

III. New Services Explosion: A Challenge to Triple-Play Providers

Indeed, the pace of innovation in the communications sector is at an all-time high, with the introduction of new gadgets and services designed to pique consumers' interest and loyalty. The stakes are high, with players engaging in a free-for-all scramble for market share and dollars. U.S. Internet-connected households spend an average $214 a month on such items as phone service, movies, cable and satellite, and digital downloads, according to researcher Parks Associates. Of that, only $6.50 is spent on online music, games, and video.[6] Each player—triple-play service provider, content provider and wireless service provider—faces the challenge of striking a balance between expanding into new territory without ceding share to rivals on their existing products or services.

Echoing the rally cry of the early, land-grab days of the Web—"Content is king!"—today's communications and entertainment market is the battleground on which numerous players are challenging triple-play providers' traditional role in delivering video content. Here, good content will become an important point of differentiation, giving content providers an upper hand in the market and an increasing share of profits. New content plays include:

- *Wireless video:* As a potential threat to triple-play delivery of video on demand, wireless devices such as cell phones are a key vehicle for receiving, today, short content such as music videos. Some 5 million people in the U.S. watched video on their cell phones at the end of 2005, and that tally may double by the end of the year, says Charles Golvin, an analyst with Forrester Research. And according to the consulting firm Informa, by 2010, more people worldwide—some 124.8 million—will watch mobile TV broadcasts than there are U.S. TV households today.[7]

  Such growth projections are encouraging for wireless carriers such as Verizon Wireless and Sprint Nextel, which have invested billions making networks able to carry a host of new services, and the handset makers such as Nokia and Motorola that have spent lavishly to develop and market the latest in multi-feature phones.

  As noted in Section III, value-added services such as video won't come a moment too soon for service providers. Subscriber growth in North America and other developed markets is slowing. U.S. and Canadian operators gained 22.3 million new subscribers in 2005, down from 31 million in 2004, according to telecom consultancy Ovum. Analogous to the wireline world, increasing revenue is all the more difficult as prices for voice calls plummet. This year, per-subscriber wireless revenue may drop five to 10 percent as phone companies use price cuts to compete with cable providers.

[5] "Verizon Lays It on the Line: CEO Sticks By Costly Rollout of Fiber-Optic Network," Arshad Mohammed, Washington Post, February 1, 2006.

[6] "The War for the Digital Home," Cliff Edwards, BusinessWeek, January 23, 2006.

[7] "The Brave New World of Wireless," BusinessWeek, January 23, 2006.

- *Mobile games, shopping and music:* Major players such as Electronic Arts are entering into the mobile arena, with its December 2005 acquisition of mobile games publisher Jamdat. Recently, Japanese telco NTT DoCoMo bought a stake in Fuji TV. Motorola has announced that it will release phones with a special Google button, taking the user directly to a personalized Google page. The search giant is also looking to put in icons leading to, say, a major online retailer site, or a popular video channel. If such content providers' brand and content prove compelling enough, they could even eventually turn into direct competitors, industry observers say. A Google or an Apple, with its iTunes music download service, could launch their own wireless service.

- *New set-top devices:* New devices, such as those offered by MovieBeam, an on-demand movie venture recently split off from Walt Disney company, will deliver to subscribers some movies the same day they come out on DVD. This presents a threat to triple-play providers' own VOD services, which may deliver the same movies at a later date.

  MovieBeam launched in 29 cities in February 2006. The MovieBeam model presents a shift in the way Hollywood does business, with simultaneous release of movies on DVD and via the set-top box. The service will offer movies from other studios a standard 30 to 45 days after their release on DVD.[8] Will MovieBeam be a success? It boils down to, as one journalist quipped, "Will people pay $230 and hook a new gizmo up to their television sets so they do not have to drive to the video rental store?"[9]

- *New spins on content:* Custom content and new delivery strategies are further blurring the lines of competition in the triple-play market, with some content providers skirting traditional channels and delivering content directly to users. For example, Mark Burnett Productions, which created the "Survivor" television series, plans to develop a treasure hunt series that will appear only on the AOL Web site. The show, "Gold Rush," will feature a cast of competitors searching for hidden treasure across the United States.

  "Gold Rush" joins other reality shows on AOL, including one called "The Biz," in partnership with the Warner Music Group, and "Start Up," aimed at a small-business audience. These shows are examples of how, in recent years, AOL has tried to create more free programming to increase online advertising revenue at a time when other large Internet portals are signing deals to add more TV shows on their sites. AOL scored a hit with the live online broadcasts of last year's Live 8 concerts on its Web site, whose audience eclipsed the TV viewing audience.[10]

  Many other players are making video available online, as well; during the 2004 Olympics in Athens, NBC offered only limited video highlights on its Web site. During the 2006 Winter Games in Turin, it provided full video coverage of nearly all of the top competitors and U.S. participants free online. In January 2006 Google Inc. began charging consumers to download commercial videos ranging from old "Brady Bunch" episodes to National Basketball Association games. Apple Computer offers more than 50 TV series such as "Battlestar Galactica" for download from its iTunes store. Consumers can view with DVD-image-quality hundreds of feature films including "Mr. & Mrs. Smith," from sites such as CinemaNow. Other services are in the works.[11]

  Network television broadcasters are also getting into online video-on-demand, effectively disintermediating triple-play service providers. Most recently, CBS announced in February 2006 that it would offer episodes of the new cycle of its reality series, Survivor, via a $1.99 per-episode download on CBS.com at midnight following that night's show on the network. CBS.com will charge $1.99 per episode, and buyers will be able to view the episode anytime for up to 24 hours after ordering it. The episodes for the series will be available through June 2006.

  Leslie Moonves, president and CEO of CBS Corp. said it is the first time that a television network has offered prime-time programming for a fee on demand on its wholly-owned Web

[8] "MovieBeam to Show Disney Films On Demand on DVD Release Day," Merisa Marr, The Wall Street Journal, February 14, 2006.

[9] "As an Alternative to a Trip to a Video Store, Movies Through a Set-Top Box," Saul Hansell, The New York Times, February 14, 2006.

[10] "AOL Plans Show with 'Survivor' Creator," Reuters, January 31, 2006.

[11] "Choices Expand for Watching TV on Your PC," Kevin J. Delaney and Bobby White, The Wall Street Journal, February 22, 2006.

site. "It's been our strategy to exploit content across as many different platforms as possible, and putting this hugely popular series online is a natural fit," Moonves said in announcing the move. "This is not only a boon to fans of the show, who can now watch it at their leisure, but it also represents a great way to generate traffic for CBS.com, while opening a whole new revenue stream for CBS." [12]

CBS will also be sending wireless content directly to consumers. It recently announced the first subscription services that send news and entertainment alerts that include video clips to mobile phones, part of a broad new strategy to sell wireless media products directly to consumers. A CBS News to Go service will be sold for 99 cents a month, while a service called E.T. to Go, focusing on entertainment news built off the show "Entertainment Tonight," will initially be offered for $3.99 a month.[13]

IV. Wireline and Wireless: A Marriage of Necessity?

Increasingly, the differences between wireline triple-play providers and wireless companies are receding, as they join together to offer combined services that leverage respective strengths. For example, in November 2005, Sprint Nextel and cable companies Comcast, Time Warner Cable, Cox, and Advance/Newhouse committed $200 million to a joint venture. When the service debuts later this year it will offer users a single mailbox for wireless and wireline phones and the ability to program home digital video recorders (DVR) with mobiles.

In the business market, wireline and wireless services are also blending. For example, in January 2006 Verizon launched its new Verizon Business unit, announcing both a global integrated product portfolio and new integrated wireless/wireline service offerings. The new unit is a combination of MCI and Verizon Enterprise Solutions and will make services available in 75 countries.

As part of the launch, Verizon Business announced its first new products. The announcements, moving quickly to combine MCI's business acumen with its industry-leading wireless unit. The integrated wireline/wireless offerings combine Verizon Wireless' EV-DO broadband data with the former MCI's remote access platform to create a secure means of enabling workers to access corporate data networks and the Internet while traveling or working away from the office. Verizon is also making the broadband data service it has launched in metro areas nationwide available for business continuity purposes, to allow companies to continue operations in the event of commercial power failures or disasters which knock out the landline network.[14]

V. Visionael Network Resource Manager: Core Network Performance Management for Triple-Play Providers

Network asset management represents the next generation of software used to manage the large, growing and ever-more complex networks that will carry core triple-play services and value-added offerings. As opposed to the tactical, reactive orientation of traditional network management products, network asset management offers both a high-level, strategic view of network resources and an extremely granular view into the smallest components of network inventory. Network asset management solutions allow users to compare the desired state of the network versus its as-built state, and provide the tools to proactively manage change.

Equipped with the proper network asset management tools, network professionals can plan changes and new scenarios, implement those changes, and continually measure whether the network is meeting objectives for design. For triple-play providers, this fine level of control provides definitive answers to providers' most pressing question—"Is the company building the network the way it intends to?"—as they prepare to deliver triple-play and value-added services on a large scale.

[12] "CBS.com Sells Survivor Episodes Post Airing," John Consoli, MediaWeek, February 1, 2006.

[13] "CBS Intends to Ring In With Breaking News for a Subscription Fee," Richard Siklos, The New York Times, February 27, 2006.

[14] "Verizon unwraps new business unit," Carol Wilson, Telephony Online, Jan 23, 2006.

Visionael NRM enables network knowledge and control

Visionael network asset management solutions are standards-based and specifically designed to enable service providers to secure and manage efficient, scalable networks, in order to maximize the profitability of current offerings while preparing to offer complex triple-play services. Visionael Corporation has acquired years of experience in working with telecommunications carriers, enabling it to fully understand and respond to the unique requirements of service provider networks.

Visionael software transforms the economics of deploying, delivering and managing triple-play services, providing carrier-grade service creation and network resource management software solutions. The company's software products are a key component of any cutting-edge operations support system (OSS) or network management system (NMS). Visionael Network Resource Manager, the company's flagship product, couples the centralized repository of physical and logical network inventory with an unparalleled combination of capabilities that delivers an accurate, real-time view of network resources.

For triple-play providers, the Visionael solution delivers important benefits including:

- Reduced time and cost in deploying new equipment, because granular knowledge of network inventory reduces guesswork and potential installation problems.
- The ability to recover and re-deploy stranded assets. This leverages NRM's ability to provide current and extremely accurate knowledge of network resources. While industry-wide averages indicate that only 30 to 60 percent of network resources are known, current Visionael deployments deliver discovery levels of 99 percent-plus of network assets.
- Interfaces to digital rights, customer relationship management and service delivery systems through the Visionael application programming interface (API) set.
- increased efficiency and up to 90 percent lower labor costs associated with repetitive provisioning tasks.
- Reduced mean time to repair (MTTR) by up to 40 percent, through correlation of Visionael NRM with fault management systems. This enables service levels that support new value-added services including IP-VPNs and hosted solutions, ISP-style services and VoIP, a key component of triple-play services.

V. Summary

As the pace of change accelerates in the triple-play arena, new business challenges and opportunities arise on a daily basis, forcing triple-play providers to quickly move up the value chain in a tense game of survival. No longer blessed with the perpetual revenues of a “razors and blades” business model, providers are confronted with a triumvirate of major developments—declining revenues from connections and core services; the rise of new content delivery competitors, and the merging of the wireline and wireless domains. In grappling with these changes, one thing remains certain: the key to the success of any triple-play services is optimal network performance. Without it, service delivery lags, sowing the seeds of customer dissatisfaction and defection.

Network asset management therefore plays a similarly critical role in enabling triple-play providers to pursue opportunity in the near- and long-term. For triple-play providers, Visionael NRM, a premier network asset management solution, delivers important benefits including:

- Reduced time and cost in deploying new equipment
- The ability to recover and re-deploy stranded assets
- Interfaces to digital rights, customer relationship management and service delivery systems
- Increased efficiency and up to 90 percent lower labor costs associated with repetitive provisioning tasks
- Reduced MTTR by up to 40 percent.

About Visionael

Visionael Corporation is a software and services company that enables customers to effectively plan for and respond to the ever-changing complexity associated with large computer networks. Enterprises, government organizations, network outsourcers, and telecommunications services providers rely on Visionael tools and insights to know and manage the risks associated with deploying new network technologies and services. The company has an extensive worldwide customer base, including Alpheus Communications, Comcast, EDS, Kaiser Permanente, IBM Global Services, Sprint and Vodafone. Channel, system integrators and partners include Dimension Data, EDS, Logica and Pride. Visionael Corporation is a privately held company, headquartered in Austin, Texas, with major development facilities in Tulsa, Okla., and Bangalore, India. Sales offices are located throughout North America and Europe. For more information, please visit http://www.visionael.com/, or call +1-650-963-0960.