

WideCast™

Content Aware Networking



The broadband era continues its massive growth in both the wireline and wireless markets. Over-The-Top (OTT) video content in particular is stressing provider infrastructures and business models, and the percentage of video traffic on the Internet is predicted to grow to as much as 90% by 2013.

Mobile broadband traffic is the fastest growing segment by many accounts, with subscribers, devices, and bandwidth consumption all increasing. High Speed Internet services also ask more of the provider network, because the frequency, duration, and resolution of content requests are increasing as movies, TV shows, and other Internet video content become more readily available and compound bandwidth demand. Going forward, it is imperative that providers avoid becoming commodity bit transport suppliers and insert themselves into the OTT value chain.

Addressing the OTT Video Opportunity

BTI Systems WideCast solution enables service providers and others in the content delivery chain to directly and cost-efficiently address issues of exponential network and data-center growth and customer responsiveness. Content-aware networking, including edge-based content caching, delivers a sizeable reduction in the bandwidth required to serve content over the network and Internet transit points. Frequently requested content is sourced local to the consumer rather than being streamed from the major data-centers, improving Quality of Experience (QoE). Content is rapidly accessible and system control requests are reacted to quickly, because the content is sourced from a much closer location.

WideCast Key Benefits

Important benefits of BTI's WideCast solution include the following:

- **Substantial Network Cost Reduction** – Service providers can reduce their costs by ensuring that popular, large file content is supplied closer to the network edge and off-loading this content from the “middle mile” between remote locations and Internet peering points. Typical solutions to date involved adding bandwidth or building service overlays, which add cost and operational complexity. However, distributing content

further out in the network enables sizeable bandwidth reductions (in some cases it has been shown that up to 80% of content can be stored locally), and this allows network infrastructure to be more fully utilized over longer periods. Additionally, bandwidth savings translates directly to decreased internet peering or transit costs and reduced leased line costs.

- **Excellent User Experience** – With transparent caching, providers are better able to deliver “always-on” services that are much more responsive to customer requests. Content played from the network edge, in much closer proximity to the user, can be delivered orders of magnitude faster than content delivered from the core. In some cases, download and buffering has been performed up to seven times faster! This delivers the outstanding service quality and a level of user experience that will eliminate customer churn and help attract and retain new customers.
- **Significantly Improved Network Control** – Because intelligent transparent caches are network-aware, they can better determine the content to cache locally to effectively optimize the network. The most popular content is cached and delivered very close to the edge; less popular content is cached deeper in the network. As much as 75% of consumer broadband traffic may be cacheable, which ultimately can reduce transit traffic and alleviate bandwidth bottlenecks. By deploying intelligent caches strategically throughout their networks, service providers can deliver content as close to the end user as is practical. With full “lights-out” management capability, any remote unmanned location can become a lights-out data center, reducing costly truck rolls.

WideCast Key Feature Overview

BTI's WideCast solution offers the following capabilities that permit service providers to implement content-aware networking with ease.

Distributed, edge-based implementation

BTI Systems advocates distributing content further out in the network for bandwidth savings and greater network efficiency. The WideCast solution enables content delivery functions to be pushed right to the edge of the network. Handling requests and control plane functionality at the network edge

offloads the delivery network significantly. Content is sourced locally, close to the subscriber where it's more rapidly sourced, and control commands are more rapidly acknowledged and acted upon, effectively overcoming traditional bottleneck points. Distributing content also allows service providers to effectively limit the impact of bandwidth associated with OTT content on the network. Bandwidth in the metro access network as well as from the PoP back to the Internet peering point can be reduced. WideCast fits into traditional data centres as well as remote COs, wiring closets, and outside plant vaults, huts and base stations.

Autonomous Operations

The WideCast solution enables service providers to “deploy-and-forget,” as it supports a wide range of services and protocols and with no manual configuration needed. The system is self-learning. It manages and monitors subscriber requests for content intelligently and determines what to cache and what to source from farther back in the network. Additionally, WideCast never interferes with Internet applications, such as pay-per-click, peer ratings, and conditional access provisions. This mode of caching guarantees that the content served from cache is always up-to-date and available without operator intervention. WideCast's integrated intelligence and its support for all popular types of OTT content means that once it is integrated into your network, it takes care of the rest — you just realize the bandwidth savings and happier customers.

Completely aligned with legal requirements

The Digital Millennium Copyright Act of the United States and similar European Union documents were authored to recognize content caching for the purpose

of network efficiency and without modification as legal and protected by law. The WideCast transparent cache, together with these appropriate policies, enable carriers to deploy the system in full compliance and alignment with major North American and European legislation regarding copyright protection. No manual content management is required to maintain legislative alignment.



Open Platform

WideCast is designed as an open platform, enabling its continual evolution while maintaining class-leading performance. Additional applications that would benefit both the subscriber and network operator when deployed closer to the network edge may be developed not only by BTI but by our partners and customers as well. Leveraging a carrier-grade Linux-based operating system helps WideCast assure ease of application development and integration.

Transparent Caching Delivers Greater Network Efficiency and Service Intelligence

Offering OTT service capabilities and participating in the OTT value chain provides competitive differentiation, the potential for higher subscriber satisfaction and ARPU, and new revenue opportunities through specialized offerings to content providers. BTI's WideCast solution is a scalable and reliable content-aware networking solution that will help you seize this opportunity. A transparent cache that can be deployed further into a service provider's wireline and wireless backhaul infrastructures, WideCast provides the greatest benefits in cost reduction, increased network control and improved end-user service quality.

Product Specifications

		WideCast 300	WideCast 200
			
Applications	Transparent Cache (Unmanaged content)	✓	✓
	Edge distributed, managed content (Espial)	✓	✓
Management and control	Integrated Lights out management	✓	✓
Interfaces	Dual Quad 1GE Intel copper NICs	✓	✓
Storage		External SAS	8 Internal HDD/SSD External SAS
Physical dimensions	Depth		300mm
	Height	2U + Storage unit	2U + Storage unit (optional)
Deployment Options		ETSI/ANSI racks	ETSI/ANSI racks and cabinets
Power		AC/DC	DC
Environmental	Normal operating	10 to 35° C	0 to 40° C
	Extended short term	10 to 35° C	-5 to 55° C
Regulatory		CE, RoHS	NEBs level 1, FCC Part 15 Class A, CE, RoHS