Faster content retrieval increases customer satisfaction and loyalty

Improves subscribers’ available throughput by 30% under variable network conditions

Reduces webpage loading times by up to 40%

Allows for network resources to process more traffic by using them efficiently

Reduces or defers network expansion requirements

Unprecedented performance – built on top of Integra, the most scalable and highest-performing mobile data VAS platform available on the market, offering a throughput of 100Gbps of HTTP traffic on a 16-blade chassis

Runs on commodity hardware (x86/ia64) and on RHEL 6.4+ 64-bit

DynaBoost

Accelerating Mobile Data Networks

The dramatic increase in traffic on mobile data networks means operators need to maximize network capacity without sacrificing the end-user experience. DynaBoost’s accelerated delivery of content ensures the most efficient use of resources to deliver the best experience at the least cost.

Efficient Network Utilization

Traditional TCP was not designed with mobile networks in mind. Even sporadic packet loss, not necessarily caused by congestion, can drastically slow transfer rates and webpage loading times or degrade video streaming experience, leading to customer dissatisfaction.

Openwave Mobility’s DynaBoost is a clientless solution that accelerates the mobile Internet experience through optimal bandwidth utilization, providing subscribers with faster browsing and more immediate access to content.

DynaBoost reduces loading times and increases transfer rates by maximizing the efficiency of the transport layer in mobile data networks. It also reduces webpage loading and rendering times through the compression and caching of popular content close to the user.

Mobile Operator Benefits

Improved Quality of Experience that results in increased revenue. DynaBoost improves subscriber effective throughput by up to 30% and reduces loading times by up to 40%, even in adverse network conditions

Optimal utilization of network resources that maximizes profitability. By transferring data faster, network resources are released earlier and can be further consumed by more users

Deferment in network investment due to RAN coverage expansion, through a significant improvement in the delivery of data under variable network conditions, where traditional TCP operation is ineffective
DynaBoost

Next-Generation Learning-Based TCP Optimization

DynaBoost features an innovative learning-based TCP optimization engine that reduces loading times and increases the available throughput by making the most of subscribers’ allocated network bandwidth.

Designed with mobile networks in mind, it lifts up the transport layer performance by speeding up traditional TCP Slow-Start phases, rapidly recovering from packet loss, converging earlier to optimal CWIN values and reducing TCP retransmissions.

Traditional TCP congestion control algorithms and optimization engines associate any sign of packet loss and round-trip time variation to network congestion. This assumption is not always true in mobile networks but a simplification of what is really happening. Once congestion is detected, traditional solutions take the most conservative strategy to deal with its signs, significantly slowing data transfers.

By tracking and categorizing congestion scenarios based on traffic statistics in real-time, DynaBoost dynamically reacts to changing network conditions based on the analysis of multiple TCP connection indicators - in addition to packet loss and RTT - that determine the efficiency of the transport layer protocol.

This learning process takes place on a per TCP connection basis, improving the results that traditional loss- and delay-based TCP congestion control algorithms can achieve in mobile data networks.

By mediating each TCP connection, DynaBoost keeps TCP connections established even on unfavorable RAN conditions, preventing any retransmission from being delivered by the origin server, minimizing retransmissions impact and saving data in the transit links.

Optimal Efficiency for All TCP Traffic, Including HTTPS

Networks are experiencing an increase in TLS/SSL encrypted traffic. DynaBoost accelerates all TCP traffic – including those flows encapsulating HTTP and HTTPS traffic.

Load Content Faster

Through a combination of acceleration techniques and advanced traffic management, mobile Internet access is significantly faster.

Reduced Image Size and Retained Quality

Advanced image optimization technology reduces the time needed to deliver image content while retaining the visual quality, file format and image resolution.

In-Memory Web Cache With Optimized Content

DynaBoost includes a highly efficient and distributed in-memory cache especially optimized for today’s small volatile web objects where optimized variants of the content are stored. This in-memory architecture minimizes the latency associated with I/O operations, allowing for a quick storage and delivery of popular web objects. In this way, web loading times are significantly reduced, improving subscribers’ QoE.

Distributed Video Cache and Offline Video Optimization

As video content becomes popular, an offline optimization process is scheduled to generate as many different optimized variants of the original video as optimization profiles are defined in the system. The optimized content is finally stored in a shared cache, accessible to all application servers. The system determines whether a given video object is available in the cache by inspecting the video fingerprint – as opposed to traditional video ID or URL-based approaches – maximizing the cache hit ratio.

About Openwave Mobility

Openwave Mobility empowers operators to manage and monetize mobile data using the Industry’s most scalable, Layer7 SDN/NFV enabled platform, Integra.

Integra applies advanced Video Optimization to eliminate data congestion, while using Policy Engagement and Analytics to increase ARPU through personalized data plans.

Openwave Mobility provides true carrier class solutions, working with over 40 of the world’s largest service providers and delivering over 40 billion transactions every day to over half a billion subscribers.

Openwave Mobility is a Global Company headquartered in Redwood City, California.