

Cisco CTE 1400 Series Content Transformation Engine

The Cisco CTE 1400 Series Content Transformation Engine represents a breakthrough in content transformation as the first appliance-based solution on the market to deliver back-end content to a variety of mobile devices including Wireless Application Protocol (WAP) phones, personal digital assistants (PDAs), and the Cisco IP Phone.

Simply insert the Cisco CTE in the network, assign an IP address and subnet mask to the CTE, and it is ready to use. It provides seamless, device-specific formatting and session management.

Using a GUI-based tool, CTE Design Studio, nonprogrammers can create device-specific transformation instructions for your Web site or set of content in a matter of minutes or hours. This contrasts with the heavyweight systems currently on the market, which require weeks or months of external consulting time to integrate and configure.

A few examples of what you can do with it:

- Provide directories, perform yellow pages searches, push graphics and audio files to the Cisco 7960 IP phones

- Provide wireless access to parts lists, order status, technical assistance center queries to remote field people
- Provide a hosted service to trivially mobilize enterprise Internet content
- Provide remote, wireless access to network management information
- Perform inventory management using off-the-shelf, non-proprietary devices and all standardized protocols
- Eliminate horizontal scrolling on content delivered to palmtop devices

Content transformation limited only by your imagination

How It Works

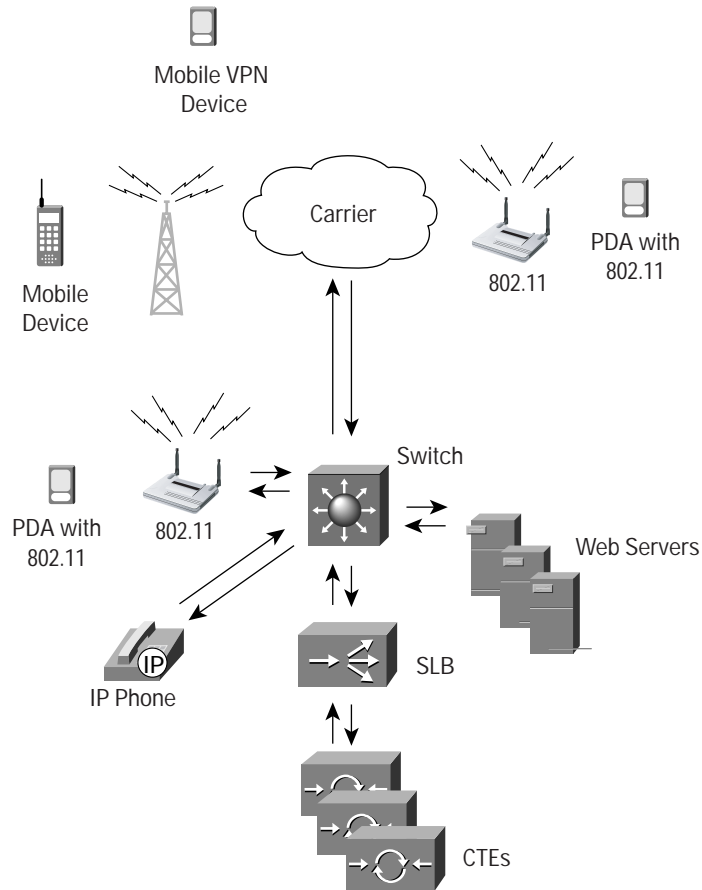
The Cisco CTE accepts requests from mobile phones, PDAs, or IP Phones and, in turn, requests the content from the back-end servers. Functioning as a reverse-proxy, the CTE acts like a Web server to the client device, and acts like a client device to the Web server. The CTE transforms the content differently for each device and sends the transformed content out over the network to the requesting device.

Figure 1
 Cisco Content Transformation Engine 1400





Figure 2
The Cisco CTE Connects Mobile Devices and IP Phones to Content

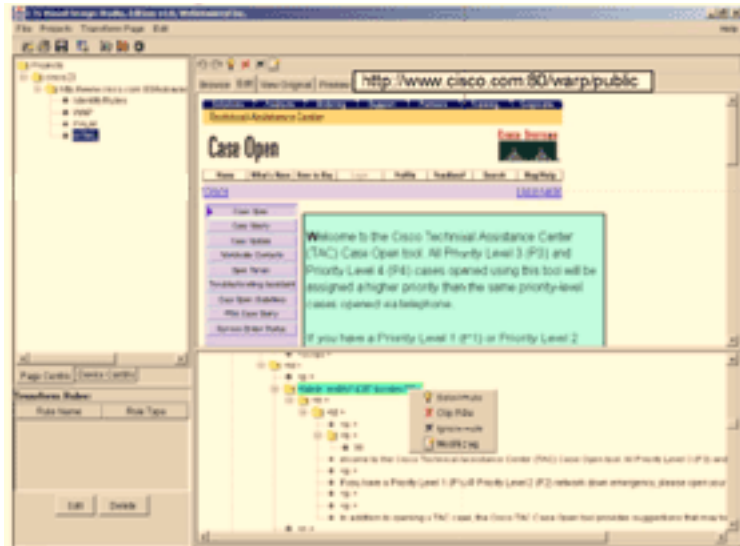


How the CTE Transforms Content

Working offline in the Design Studio GUI, content administrators clip and edit content and select from a rich library of rules using a point-and-click interface to define transformation rules. When provided with transformation rules via download, a CTE selects the appropriate rule based on the content, and the device dynamically transforms the content to suit a specific device's memory and screen requirements. Rules take effect on the next request.



Figure 3
Cisco CTE Design Studio



Key Benefits

The benefits of this simple, revolutionary approach are significant. The Cisco CTE empowers the mobile Internet generation with:

- *Fast installation*—Slides into a rack unit, occupying a single space, plugs into the network in front of content servers, and installs in any network infrastructure in minutes
- *Seamless operation*—Works seamlessly with routers, switches, server load balancers, cache engines, Web servers, firewalls, virtual private network (VPN) solutions, and 802.11 wireless LAN products
- *Rapid deployment*—Mobilizes Internet content, intranet/extranet content, and enterprise applications in a matter of hours or days
- *Single-source HTML or XML content*—Requires no expensive content duplication or maintenance—uses existing content
- *Simple transformation instructions*—Provides GUI interface that requires no programming or XML experience to create device-specific transformation instructions for a Web site or a set of content
- *Device-specific content*—Automatically recognizes a device making a content request and renders the content to suit the device's display and memory requirements; supports mobile phones, PDAs, Research in Motion (RIM) devices and the Cisco IP Phone
- *Secure reliable connections*—Provides Secure Socket Layer (SSL) connection
- *Line-rate performance and scalability*—Supports 1000 simultaneous connections and 10,000 user sessions per CTE; to support more users, stack additional CTEs and scale up
- *Low cost of ownership*—Requires no monthly hosting charges or continuing contracts for customization as your content evolves



Mobilize Your Enterprise Applications

With the CTE mobilizing enterprise content, you can access critical information while you are away from your desk. The CTE currently mobilizes the following intranet and extranet applications:

- *Sales force automation*—Price lists, sales dashboards, order status, shipment status
- *Service and support*—Case queries, case updates, and support information
- *Manufacturing and distribution*—Real-time inventory management and factory-floor automation
- *Executives*—Directory access, financial updates, and intranet access
- *Mobile workforce*—Critical enterprise applications for workers in the field in healthcare, transportation, government, and other industries

Extend the Internet to the Mobile World

Consumers on the move expect and demand mobile Internet access. Mobile access provides a critical differentiator in many industries and multiplies the customer base for consumer products and services including:

- *Entertainment*—Restaurants, tourism information, city guides, and movies
- *Travel*—Airlines, rental cars, hotels, motels, and key services
- *Financial*—Mobile banking, mobile transactions, and stock information
- *Critical information*—Yellow pages, driving directions, and directories
- *Mobile Internet*—Location-based services

Performance Summary

- Supports 1000 simultaneous connections
- Handles 10,000 active users

Device Support

The base CTE product comes native with support for transformation to VoiceXML and Cisco IP Phones. Transformation licenses are available for Research In Motion® Blackberry® devices, HTML (Windows CE, regular desktops), Palm® Devices, and WAP phones. All licenses can operate simultaneously on a single CTE. This allows our customers to only pay for the device support that they need. This is particularly valuable in a trial environment, where an application is being developed. It is trivial to take the transformation rules that have been developed for one device and enable them for multiple devices once the application is released to general availability.

- Cisco IP Phone (XML)
- Wireless phones (cHTML, HDML, and WAP 1.1 phones using Wireless Markup Language [WML]) (CTE-HTML, CTE-WAP)
- Palm devices (HTML) (CTE-PALM)
- RIM pagers (HTML) (CTE-RIM)
- Pocket PC devices (HTML) (CTE-HTML)
- Desktop or laptop computers (HTML) (CTE-HTML)



Page Format Support

- Supports any HTML content, either Web-server or enterprise-application based
- Supports large forms in HTML
- Supports up to 512 kbytes content size per page, not including images
- Handles malformed and overlapping HTML
- Supports raw XML data source using Extensible Style Sheet (XSL) transformations
- Provides XSL style sheets to allow direct uploads
- Splits large page documents into smaller documents for small devices
- Strips unsupported content like JavaScript and Macromedia Flash for devices that cannot perform client-side processing

Data Reduction to Accelerate Content

- Reduces image sizes and color depth
- Clips unneeded text and graphics

Data and Session Management

- Provides virtual cookies for devices that do not natively support cookies
- Works with any Web server and any HTTP gateway (for example, any WAP gateway)
- Supports fault-tolerant configurations of Web servers or Cisco CTEs
- Operates in in-line mode without a server load balancer

Security

- Supports SSL sessions, including HTTPS
- Supports VPN
- Supports secure cookies
- Supports login authentication, including HTTP 401
- Authenticates devices that do not support authentication natively, including Palm devices
- Maintains secure connections to clients, independent of Web server connection

Physical Specifications

- Rack-Mountable Chassis: 1.70 x 17.61 x 24 in. (HxWxD)
- 1RU rack height
- Weight: 26 lb max.

Operating Environment

- Operating temperature: 50 F to 95 F (10 C to 35 C)
- Storage temperature: -40 F to 149 F (-40 C to 65 C)
- Operating relative humidity: 8% to 80% (noncondensing)
- Storage relative humidity: 5% to 95% (noncondensing)
- Operating vibration: 0.25G at 3 Hz to 200 Hz for 15 minutes
- Storage vibration: 0.5G at 3 Hz to 200 Hz for 15 minutes
- Operating shock: 6 shock pulses of 41 G for up to 2 ms
- Storage shock: 6 shock pulses of 71 G for up to 2 ms
- Operating altitude: -50 ft to 10,000 ft (-16 m to 3,048 m)
- Storage altitude: -50 ft to 35,000 ft (-16 m to 10,600 m)

- Part 15 (FCC)
- ICES 003
- VCCI Class A
- CNS 13348 (BSMI)
- AS/NZ 3548
- UL 1950
- C22.2 No. 950
- EN 60950
- IEC 60950

Agency Approvals

- CE Mark
- EN55022
- CISPR22
- EN61000-3-2
- EN61000-3-3
- EN55024
- EN50082-1
- EN50082-1
- CFR 47

Cisco Content Transformation Ordering Information

Product Number	Product Description
CTE-1450-K9	Base CTE hardware with support for IP Phone transcoding and VoiceXML
CTE-WAP	Software license key for transformation to WAP devices
CTE-PALM	Software license key for transformation to Palm [®] devices
CTE-RIM	Software license key for transformation to Research in Motion Blackberry devices
CTE-HTML	Software license key for transformation to HTML devices (Windows CE, for example)



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