

# Delivering IMS Apps to Mobiles Devices: You Don't Need an App for That!

Patrick Fournier, VIRTEL Distribution Manager for US and Canada

IMS™ applications are the workhorse of transaction-intensive data processing and continue to experience healthy growth. But the 3270 user interface (UI) of IMS applications has not kept up with the times. Today, many end-users prefer the universal access, intuitive navigation, and assisted data entry of web applications. And the gap is becoming wider and more visible with the growing use of Smart phones, PDAs, and tablets as web access devices.

How can one quickly, easily, safely, and cost-effectively combine the strengths of IMS with that of web applications? How about a host-based technology that would serve IMS applications through modern Web 2.0 HTML pages?

VIRTEL is a host-based web-enabling technology that leverages the business logic and screen-based presentation of IMS applications, while extending those applications through rich HTML/JavaScript Web 2.0 pages to any web browser—even Smart phones, PDAs, and tablets.



Figure 1: Delivering IMS applications to any web browser—even mobile devices and tablets

## VIRTEL Technology Highlights

VIRTEL is comprised of:

- A dynamic mainframe/web protocol conversion engine that runs on the mainframe
- A native VTAM® relay to handle the VTAM connection with IMS applications
- An HTTP/S or SMTP server to handle the TCP/IP connection with the web
- User-defined scenarios and scripts to control the process

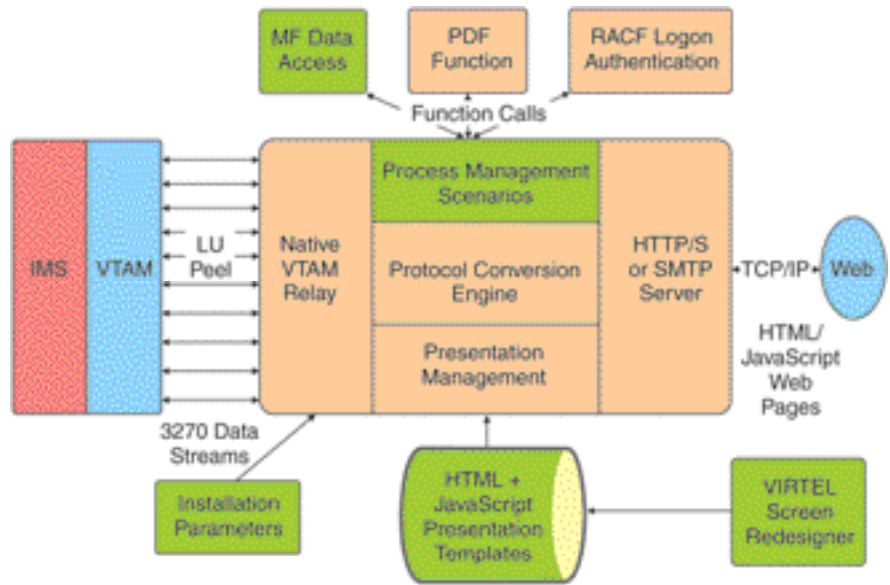


Figure 2: VIRTEL product architecture

- User-defined HTML/JavaScript templates to control the presentation

such as sortable tables, dynamic generation of PDF documents or Excel tables, and information sent via email.

## Step 1: Web Access

With default presentation templates, VIRTEL automatically serves each IMS screen as a separate web page with classic 3270 presentation and ergonomics: “green screens” look, PFK navigation, and esoteric 3270 data entry.

## Step 2: Web 2.0 GUI Development

Using custom-developed scenarios and templates, VIRTEL can inject new life into IMS applications by serving them as modern Web 2.0 GUIs:

- The new UI is based on true web navigation logic with option buttons, help pop-ups, check boxes, and more. 3270 screens can be regrouped into fewer web pages. Tabs are used to subdivide the pages and organize the new navigation.
- Data entry is assisted with plain-English and possibly context-sensitive selection lists, graphical calendars, and auto-suggest or auto-complete fields. Esoteric 3270 application codes are hidden. The IMS application becomes user-friendly and intuitive, just like any true web application.
- New features can be added to the user interface using Ajax technology to improve the display of output,



Figure 3: Creating a rich Web 2.0 GUI from 3270 data

## Step 3: Mobile Compatibility

VIRTEL is a true thin-client solution: it runs on the mainframe and doesn't use any client API or intermediate server. In addition, VIRTEL relies exclusively on open standard Web 2.0 technologies (HTML, JavaScript, Ajax, XML, REST, and WOA). As a result, VIRTEL is “client agnostic”—it works automatically with any web-enabled client: Windows XP-Vista-7-64-bit, Mac, UNIX, Linux, and even Smart phones, PDAs, and tablets.

*Continued on page 9*

# Delivering IMS Apps to Mobiles Devices: You Don't Need an App for That!

Continued from page 8

But the classic 3270 screen layout is impractical on mobile devices. The solution is custom-developing VIRTEL scenarios and templates to convert the 3270 data to a web page layout that is better suited for the smaller display and special ergonomics of mobile devices. One needs to:

- Use JavaScript widgets designed for virtual keyboards and other particular mobile ergonomics, such as the JQuery JavaScript library, which is considered the best at supporting the most capable and most widely distributed mobile browsers
- Prevent the cursor from positioning outside data entry fields to avoid the “fat finger” effect
- Display virtual PFKs because there are no PFKs on the mobile devices’ virtual keyboards
- Convert the 3270 screen layout to a vertical field stack (often referred to as *accordion*) to take advantage of:
  - The natural up and down scrolling capabilities of mobile devices
  - The refocusing capability, which allows displaying larger and more readable fonts

Not all web users will access data from a Smart phone, PDA, or tablet. Using multiple presentation templates, VIRTEL can concurrently serve the same IMS application in classic 3270, full-screen Web 2.0 GUI, or mobile-friendly accordion modes.

## Conclusion

VIRTEL is a simple, fast, powerful, and cost-effective solution to leverage the business logic and 3270 presentation layer of IMS applications into new dynamic web applications served through rich Web 2.0 pages to thin-client web browsers, including Smart phones, PDAs, and tablets. It can be used to bridge the growing technology gap between 3270 and Web 2.0 user interfaces. VIRTEL appeals to those who want to combine the strengths of IMS applications with the ease-of-use of web UIs.

## About SysperTec

SysperTec has more than 20 years of experience with on-the-fly protocol conversion between mainframe and heterogeneous servers and terminals. To learn more about VIRTEL, visit [www.syspertec.us/IMSmobile.html](http://www.syspertec.us/IMSmobile.html). 



Figure 4: Serving the same application concurrently with 3270, Web 2.0 GUI, and mobile presentations