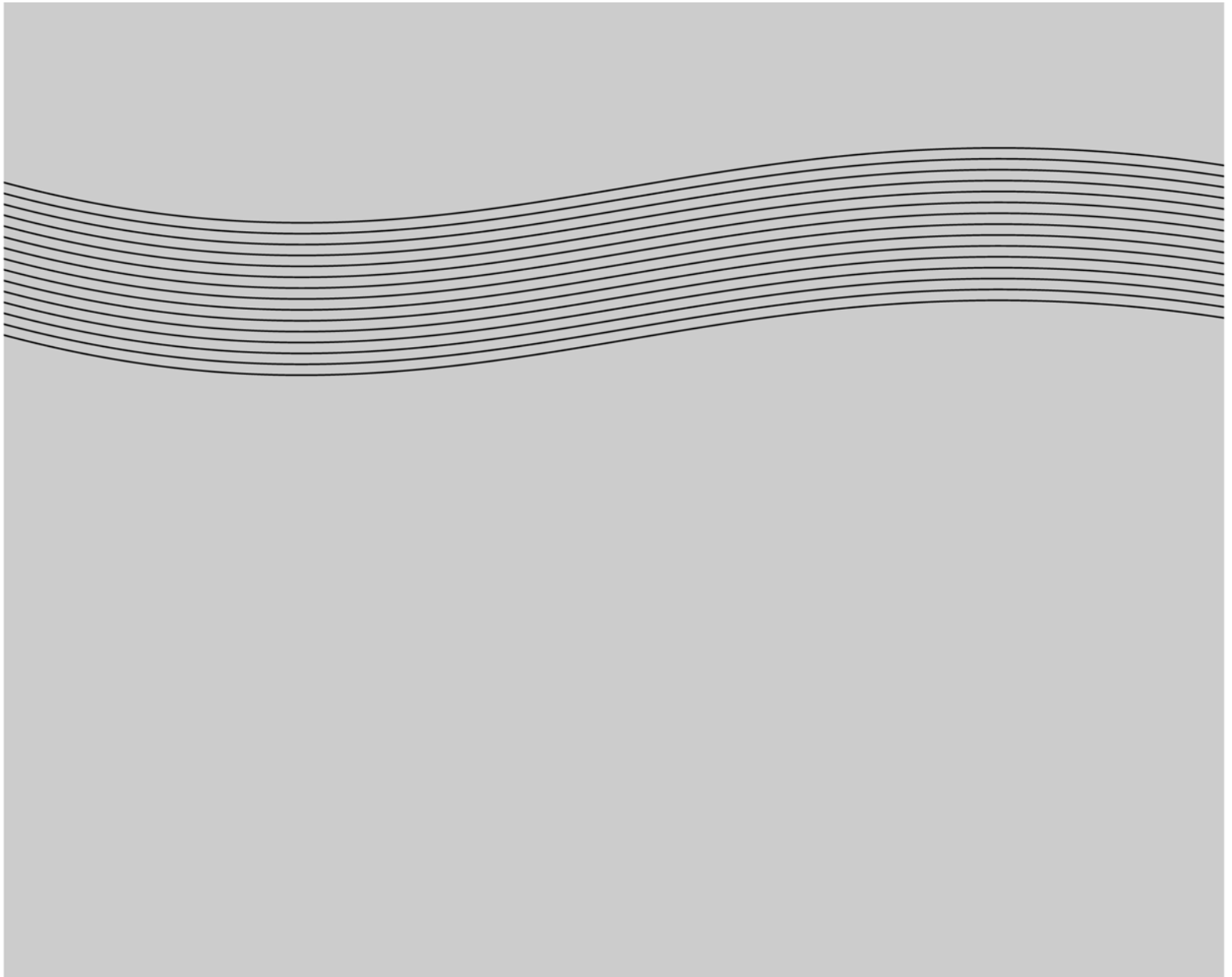


WAP PUSH, UP.NOTIFY, AND SMS Features and Benefits Comparison



WAP PUSH, UP.NOTIFY AND SMS

Features and Benefits Comparison

Product Overview

This summarizes the key differences between WAP Push, UP.Notify, and SMS. WAP Push is supported by Openwave™ Mobile Browser Version 5 and higher. UP.Notify is the precursor push technology and is supported by Openwave Mobile Browser Versions 3, 4, and 5. The target audience are developers and carrier technical staff who need a brief summary of the underlying differences between the three technologies. A more in-depth comparison of WAP Push and SMS can be found in a technical white paper, “WAP Push SMS Comparison”.

Feature	Benefit	WAP Push	UP.Notify	SMS
Allows users to immediately interact with content / application	<ul style="list-style-type: none">Improves application usability and opens opportunities for interactive applications.Increase adoption and usage	√	√	No. There are proprietary implementations that will allow it.
Full Implementation of WAP June 2000 Spec	<ul style="list-style-type: none">Open standard ensures interoperability and industry support	√	N/A	N/A
Supports Graphics and Other WML supported content (any MIME type)	<ul style="list-style-type: none">Opens opportunities to develop more compelling applications that drive adoption and usage	The presentation of graphics, sound or other content is dependent on the browser's capabilities and not controllable by the push framework.	Text only (The push is XML encoded for Over the Air. The subsequent pull can be all content types supported by the handset)	Text only. There are proprietary implementations over SMS that will allow it (e.g., Nokia's Smart Messaging)
Allows pushing to all WAP 1.2.1 Handsets	<ul style="list-style-type: none">Supports handsets from multiple vendorsMore handset options for subscribers and carriersSupport more handsets in the long term	√	No (an equivalent Service Indication can be sent to Openwave WAP 1.2.1 handsets)	No (plain text SMS only)
Allows pushing to all Openwave 3.x,4.x, 5.x handsets (backward compatibility with Messenger/UP.Notify)	<ul style="list-style-type: none">Ensures existing base of handsets benefit from WAP Push functionalityWAP Push functionality becomes relevant now for millions of subscribers	WAP Push is translated to UP.Notify for older Openwave handsets.	√ (an UP.Notify push message can be received by Openwave 3.x, 4.x, 5.x browsers)	No (plain text SMS only)

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Allows pushing to SMS-only handsets (handsets that do not have WAP Push or UP.Notify capability).	<ul style="list-style-type: none"> Ensures broadest coverage of handsets for Service Indication¹ and Service Load² push messages. Simplifies application development—one interface (PAP) for delivery to all handsets. 	√ (WAP Push is converted to plain text SMS message)	No	√
Service Loading with Service Indicator: content (e.g., WML) is <u>pushed</u> at the same time as notification (Openwave feature)	<ul style="list-style-type: none"> Subscribers receive push messages faster without having to wait for content to download compared to a pull session. 	√	Prefetch ³ and Alerts are the UP.Notify equivalent to WAP Push SL and SI.	N/A
Session Initiation Application (a Push can auto-activate a data session, launch a browser, make a phone call)	<ul style="list-style-type: none"> New useful applications can be developed, such as a automated push of a sound file that provides a traffic update so the user can keep their eyes on the road Push messages can be encrypted using a secure connection, thereby protecting privacy 	√	No	No

¹ Service Indications are alerts with a click-able link (e.g., “You have a new email, read now?”). For SMS translation, the URL will not be click-able due to limitations of SMS. The other push defined content types do not have presentation text associated them and are thus not readily translated.

² Service Loads are alerts that also automatically delivers the content to the handset without user interaction. It is similar to Service Indication but removes the need for the user to confirm that s/he wants to load the content. Use of Service Loads depends on the application and the desired user experience.

³ A “prefetch”, also known as “pull notification”, allows content to be automatically loaded in the handset cache so that the user has immediate access to the push message when viewed.

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Handset profiling (content providers can query handset capabilities or filter target handsets based on specified capabilities)	<ul style="list-style-type: none"> Push messages can be sent to handsets with specified capabilities, providing a better user experience Leverages handsets' highest capabilities rather than using lowest common capabilities to ensure breadth 	√	Communication Stack only (via session information). This is available only if the user has initiated a pull session with the content provider at a previous time.	No
Cache Operations	<ul style="list-style-type: none"> Ensures that the most up-to-date information is in the handset (e.g., a news update makes a previously cached update obsolete) 	√	√	No
Secure Push to Handset (WTLS)	<ul style="list-style-type: none"> Protects privacy of push content 	√	√	No
Confirmed Push	<ul style="list-style-type: none"> Ensures successful delivery of message 	√	√ (Using Sequence Numbering)	No
Specify “deliver before” and “deliver after” times	<ul style="list-style-type: none"> Easier to build applications that allows specific message delivery windows Example: Yahoo and MSN allows user to specify when news alerts should be sent or not sent (e.g., late at night). 	√	No	No
Scalable Architecture	<ul style="list-style-type: none"> Lowers TCO and improves subscriber experience by reducing performance issues 	√	√ (in a limited manner)	No
Supports two forms of identifiers in Push Message from PI: – Subscriber ID – Calling Line ID	<ul style="list-style-type: none"> Supports common addressing methods Calling Line ID provides an intuitive subscriber address 	√	Subscriber ID	Calling Line ID

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Supports Multiple Addressing	<ul style="list-style-type: none"> Simplifies push message submissions for developers and improves performance 	√	No	Cell Broadcast
Provides PI Access Control	<ul style="list-style-type: none"> Provides protection from unauthorized content providers (e.g., spammers) 	√ (black/white lists in addition to fine control for each content provider)	√ (black/white lists)	Yes, Network access Limited
Supports SSL to PI	<ul style="list-style-type: none"> Ensures privacy of push messages from content providers and the Push Proxy Gateway 	√	√	No application level interface
Provides Intelligent Routing to Client	<ul style="list-style-type: none"> Ensures that the push is targeted to right type of device and adapts the content and protocol accordingly. 	√	No	√, via the network
Supports Push Message Prioritization	<ul style="list-style-type: none"> Urgent messages are delivered first, providing a better subscriber experience for applications that require Quality of Service delivery prioritization (e.g., emergency notifications vs. news) 	√	No	Yes, not under the control of message initiator.
Supports Billing & SNMP	<ul style="list-style-type: none"> Enables diversity of billing models. Lowers TCO and reduces outages and time-to-resolution of system problems 	√	√	No