

# ../special tutorial /wap



**All About WAP - Part 1 (page 1)**

Article by: [The KROW](#)

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## *Introduction To The World of WAP*

### *"WAP, WAP, WAP.....It's Knocking At Your Door"*

With so much in the news about "wireless technologies", the coolfolks at coolmaps thought it might be helpful if we did an article on the development-side of "wireless application protocol" or WAP. So, for the next few weeks, we're going to do a series about the world of WAP, which will be:

- Article 1 - "Introduction to the World of WAP"
- Article 2 - "The Tools! - Doing 'Card' Tricks"
- Article 3 - "Where To Go From Here - If You Build It Will They Come?"

There's lots to discuss about WAP, and it can get confusing, even for those who've been developing it for some time! Our articles are going to help make some sense of it all. We'll cover information such as:

- Beginner's Information and Terminology
- The Pros and Cons of WAP
- Latest Tools of the Trade (and many are free!)
- "Sneak-peeks" of Great Things To Come
- And more!

### *"Without Further A'do....."*

First, let's get a clear understanding WAP:

The technology of WAP is a "hot" topic both inside and outside the "development" community. Understandably, WAP gives us a way to connect some of the biggest industries in the world, such as Net and Telcos, all in one place (like the palm of your hand!). There are so many reasons why WAP is a hot item, we can't possibly list them all here. But, check out the clue below for a quick list:



## **"Don't Worry, Be Wappy"**



Because WAP is a protocol, it needs other things to work. There are three major parts to any WAP-enabled system:

- The WAP Gateway
- HTTP Web Server
- WAP Device

Since most mapians are doing dev, we're going to focus on the "web page" end of WAP, rather than the setting up of wireless network systems. WAP applications are written in Wireless Markup Language or "WML" (we'll get into that a bit more, later on). Through the help of the WAP Gateway on the HTTP Server, the WML content is able to communicate back and forth between the devices. The pic below may help you better understand how this works:



Our happy WAP phone is now "wappy"..... he can talk back and forth to the web!

You now know of WML, but, what goes on that http server to get it to run the WML? You might check with your ISP or hosting company, as many of them have already enabled their systems to accept WML. Here are some of the most popular mime types you'll want to make sure you have:

- WML Source: text/vnd.wap.wml wml
- Wireless bitmaps: image/vnd.wap.wbmp wbmp
- Compiled WML: application/vnd.wap.wmlc wmlc
- WMLScript Source: text/vnd.wap.wmlscript wmls
- Compiled WML Script: application/vnd.wap.wmlscriptc wmlsc

With these mime types on your server, you'll be able to do many applications. You could even begin to build a wireless information portal for your clients....complete with graphics and all!



## All About WAP - Part 1 (page 2)

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### *"It's All In The Cards!"*



For those of you who have done any sort of application development, you know there's a whole bag of tools and tricks you must have to accomplish the job. But, let's start with a very basic "web page" for wireless. First off, when creating WML files for wireless, they aren't called "web pages", or even "pages"! They are called "cards". When you come to a point where you need to take to the viewer to further information (like a link), you create another card, and so on. As you build this, you inevitably create a "deck". So, what does it take to build your "deck of cards"? Let's find out.....



### *"Creating WML Files; Hit and Myth"*

A deck of cards (which we now know are simply WML files) are what begins to build our wireless applications. You're probably already familiar with many "typical" applications of WAP-enabled devices such as simple messaging, checking email, and surfing the web. Maybe you're even fortunate enough to work in an environment that also lets you do things like transferring files, remote monitoring, and even accessing a remote LAN. But, do you know about some of these other applications currently in use:

<b>Sales Force Automation</b>	<b>Remote POSs</b>
<b>Vehicle/Asset Tracking</b>	<b>Document Sharing</b>
<b>Audio</b>	<b>Video (in color!)</b>
<b>Home Automation</b>	<b>Chat</b>
<b>Mobile Commercing</b>	<b>Affinity Programs</b>

Pretty snazzy stuff! This in itself, certainly dispels the myth that cell phones are only good for playing phone-tag with your buddy, eh? Since we're on a roll, let's just correct a few other myths about WAP and WML right now.....

By now you probably have an image in your head of all the special tools and software, not to mention the hardware it must take to make this stuff work. This is where WML is largely misunderstood!

**MYTH:** You need a wap-enabled/Net-ready cell phone to test and/or view your WML files.

**MYTHLESS:** The only hardware you really need is your computer! Oh sure, it would be cool to see your work on your own phone, sitting in the palm of your hand. But you don't really need a Net-ready phone! Once you've developed your WAP files, there are a number of "emulators" out there to test your files with. These emulators are simply nothing more than a software program, that runs on your computer. It looks and acts just like a cell phone!



**Emulator: Reads WML like a cell phone!**

**MYTH:** I don't have the time to learn a whole new language! **MYTHLESS:** You can create WML pages quickly and easily! WML is very similar to HTML. It's simple in that there are no nested tables, carries very basic font control, and the cards you create are very small (short and to the point). And though, it may not directly pertain to you, WML is a part of the new XML language that's been created for more web site interactivity and ease of design. To better understand how WML looks, let's get "technical" for a minute here (don't worry....it's still very simple):

A very basic WML file consists of 2 sections: the Header and the Body.

**HEADER:** As with any HTML file, your header is going to make claim to the document type and definition. (For more information on this, you can access the very useful web site: [http://www.wapforum.org/.](http://www.wapforum.org/))

**BODY:** The body of your WML files are flanked open/close, just like HTML. So, for WML we would have: `<wml> ... </wml>`

Inside the body, you'll have at least one (maybe more) `<card></card>` tags. This captures the information to be shown in the phone. The advantage here is many "decks" (screens) of data can be downloaded in just one WML file! It goes without saying that this makes for a much more efficient application.

With this tidbit of information, we can now build a simple WML template:

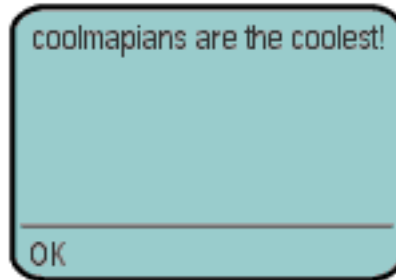
```
<?xml version="1.0"?><!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">
<wml>
```

```
<card id="maincard" title="Our first card">
```

```
<p align="center">  
  coolmapians are the coolest!  
</p>  
</card>
```

```
</wml>
```

From the source above, we would see:



**This is what we'd see on our  
wireless device, or emulator screen!  
Just plain cool!**

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### *"It's Enough To Make Wappy Sing Like A Canary!"*



Though we know WAP technologies have been out for quite some time now, it really hasn't been until recently that it's become more common among the web-dev community. As its functionality has grown, so has the WML language. So, to help give you a jump-start, here's a handy list of some of the most common WML tags.

[Click for a few WML tags for reference](#)

Armed with this information, you're well on your way to communicating with people through their wireless devices!

### *Cool KROW Clue*



Of course, it's always good to know your fundamentals. But, there are all sorts of great tools out there which will create WML cards for you. And best of all, many are in WYSIWYG environments! We'll cover these in our next article!

### *"Then and Now, Still Worth 1000 Words"*



Thanks to the creative minds of the "design community", you just know there would have been a push for graphics on wireless devices somewhere along the line! Though, due to WAP's file size allowances, images are still not what we'd like them to be. Most wireless devices are able to see graphics embedded into cards through the proper tags in WML documents. The graphic format for this is: Wireless Bitmap (WBMP). It's a simple 1-bit black and white (uncompressed) image format. A sample line of WML code for getting an image into a WML file would look like this:

```

```

So, if we put our image together with our previous template, we'd come up with a cell phone screen that looks like:



*Our cool horse has gone wireless!*

Not to be outdone by the flat coding community, the wireless "design" community also has some great software tools out there which will help you create WBMPs for your WML applications (some of them will even convert your standard jpeg and bmp files!) We'll learn more about these cool tools in our next article too!



### ***"Big Surprises Do Come In Little Packages!"***

As we briefly mentioned earlier, there's an impressive list of applications currently in use through WAP. However, what warrants further investigation, is those applications which are still in their infancy and still being tested. Examples of these are:

Global tracking and VPNs through Sats (believable)

Color video to cell (unbelievable.....but true!)

Now, before you go shaking your head and saying "Yeah, right!", let's take a few things into account. First off, it's already a known fact that wireless devices (especially cell phones) are more widely used in Europe, than the U.S. Logically, since this market does exist, it only make sense that much of these new applications being tested are done overseas, and thereby are not as well known to those of us in the U.S. Also, as wireless technologies, as well as bandwidth continue to grow, this opens new opportunities to push larger files through to wireless devices. So, in a word, "yes", these types of applications are either here now, or are right around the corner. Keep your eyes peeled, and you'll see these functionalities popping up everywhere!

Until our next article, do a little research on the WAP industry yourself, and you might be surprised at what all awaits you! We've listed some great resources to help you in your search:

<http://www.wapforum.org/>

<http://www.wapholesun.com/>

<http://www.wirelessinanutshell.com/>

<http://www.wap.com/>

Having covered a lot of great information in a short time here, we've learned some basic information about WAP and how it works, WML and how to make it work. And by now, you should have a lot more confidence in your opportunities to develop in WML. There are of course, still a number of things about WAP and WML we'll get into more, in our later articles. So, until next time, HAPPY WAPPING!

[-The KROW](#)

Contributing Writer

[club.coolmaps.com](http://club.coolmaps.com)

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### ***The Tools! - Doing 'Card' Tricks***

Mapians love tools and free goodies! So, this week, we're going to take look at some different software for creating WML files. Here's a rundown of what we'll go over:

- "Tools You Gotta Have"
- "Where To Get The Good Stuff"
- "Who's There To Help"



### ***"The Deck Is Stacked!"***

In our first article, we learned there are a few things we must have in order to create wml files, as well as get them "live" to wireless devices. But, even if you don't have your server ready, you can still go ahead and start creating these files.

Of course, we know we can build wml files in good old Notepad. But, there's something to be said for software that makes this task much more time-efficient, not to mention more fun! And, with so many programs available, which one you choose is simply a matter of personal preference. There are however, at least 3 different tools you'll want to make sure you have:

- A WML editing program
- An Emulator
- A WBMP creation/conversion program

Some programs come with part or all of those components already integrated. Also, there are lots of other "goodies" for wml programming, but we'll get into those a bit later. We're going to cover in depth, some of our most favorite programs.



### ***COOL KROW CLUE***

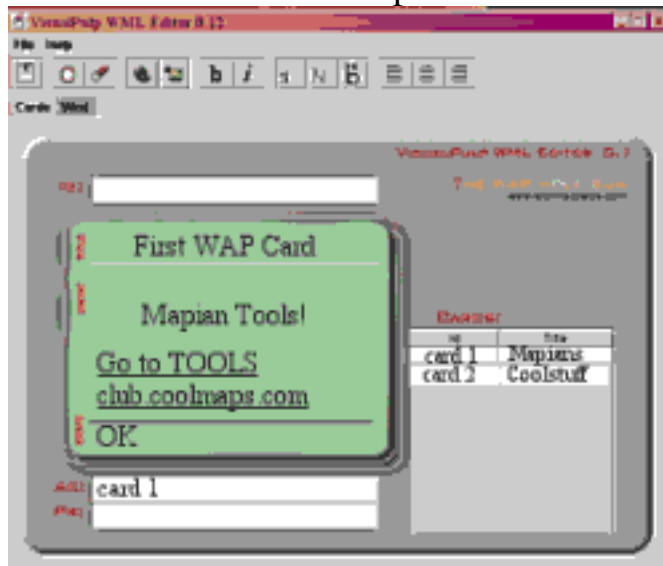
We'll cover a number of different resources in this review. So, no worries if you don't catch all the URLs! There will be a handy list for your reference at the end!



### ***"Just for Starters"***

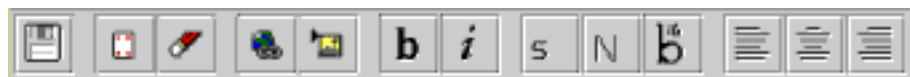
This first handy program is called "Visual Pulp" (not sure why, but it's catchy) from [WapHoleSun](http://WapHoleSun.com). It's not as fancy as other programs, but it's a great tool for those who are getting started in WAP. Best of all... it's free!

Downloadable in a zip file, Visual Pulp is written in Java, and installs clean (though you may need JRE1.2 installed). Once you're up and running, it's the simplicity of Visual Pulp that's so appealing. In a WYSIWYG environment, the workspace is not cluttered with tons of toolbars and palettes. This program takes WYSIWYG seriously, but does it without sacrificing basic functionality. Here's what it looks like on the desktop:



Visual Pulp interface... clean and simple!

That's it! You type, it types. You want to link? Just type in your text, click a button, type in the URL... and it links. Visual Pulp makes a very quick and simple job of making wml pages... even if you don't know a single line of wml code! All the basic tools to write text, create links, make new cards, and even add graphics, are in a single tool bar:



Visual Pulp toolbar: As simple as a text editor!

In Visual Pulp you can adjust font size, code accept and back events, and align paragraphs. Graphics (jpps and gifs) are automatically resized, maintaining ratio, when passed to an external WBMP converter. Upcoming versions are said to include adjustments of screen sizes for browsers, and will allow variables and input fields.

On the subject of more advanced features, if you're one who eventually likes to get in and edit actual code, Visual Pulp will probably frustrate you. Though there is a tab to view the wml source code, that's all you can do... *view it*. But, before you go discarding Visual Pulp for its lack of code accessibility, you might want to get to know it a little better. Unlike regular web pages, wml "cards" require a completely different mode of thinking when it comes to information layout and navigational structure. Text layouts and navigation aides that work well on a web page, most often do not work for wireless devices. So although you may be very good at coding pages, Visual Pulp will help speed your learning curve of cards. It will require you to "get used to" the limited viewing space on a cell phone (not to mention giving you a better taste of what it's really like to enter information using a cell phone key pad rather than a computer key board)!

Visual Pulp requires a separate program for converting images to WBMP as well as an emulator. More on those to come!

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*"Coffee Anyone?"*

Now, let's take a look at another really cool software program used for creating wml files. "Wireless Web Builder" by [Coffeecup.com](#) is another WYSIWYG program, which boasts a list of users that includes NASA, Qualcomm, Ford Motor Corp., Turner Broadcasting, and M.I.T. among others. (The list also includes "A Guy Named Ernie" and Playboy Enterprises, Inc... Do we have your attention now?)

This little gem of a program is loaded with features like:

- Drag and Drop Wizard for creating files without knowing any code
- Create, edit AND convert WBMP images (100 ready-to-use images included!)
- Built-in Code Validator
- Built-in Live Preview
- More!

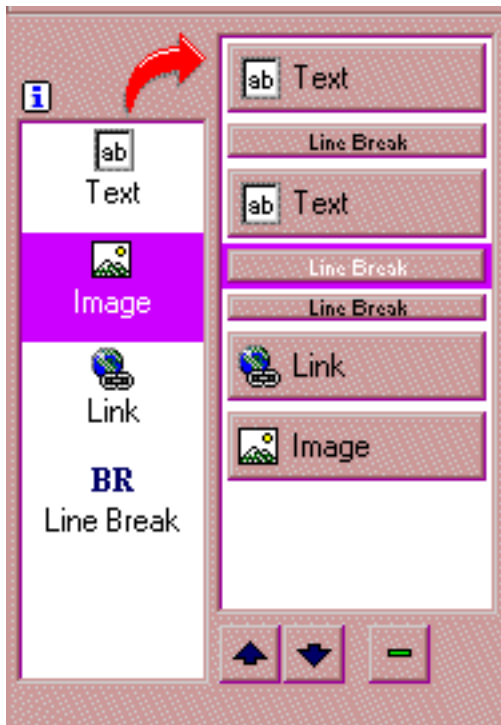
Wireless Web Builder downloads and installs quickly. The work environment is uncluttered and simple to understand (which is amazing for all the functions available).



Screenshot of Wireless Web Builder in action!

With the Wireless Web Builder interface, you'll be creating wml files in no time at all. Everything you need is in that screen. At the far left side of the screen you'll find four basic elements used to build your cards. These are: Text, Image, Link and Line Break. From this menu, you simply drag and drop your choice into the very next window.

Your flow of work will automatically move from left to right



As you place your elements into the window, Wireless Web Builder auto-updates your preview window. So, according to the above example, we're going to add an image. As we do that, our preview window looks like this:



A simple drag and drop lets you insert a graphic!



### ***COOL KROW CLUE***

In this program, you'll notice an element called "Line Break". In regular web pages, you would expect to see an actual "line" in the page. But, here, it simply acts as a "break" ( `<br>` ) in your file.



### ***"Partners In Mime"***

So, you've built your cards and you're ready to let the wireless world see them. But, what if you don't have a server set up to accept those files? Remember: In our first article, we learned there are a few things we must have on a server before our files will work.

Fortunately, Coffeecup has a solution! They've teamed up with [BlueDomino.com](http://BlueDomino.com) to offer FREE hosting of your wml files! Sign up is simple and you can do it right from your Wireless Web Builder program.



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### *"Imitation: The Best Form Of Flattery"*

THE EMULATOR! Snazzy word, eh? But what exactly is an emulator, and why would you need it? Let's find out!

Simply put, an emulator is something that imitates or copies something else. In the case of our wml files, we might use an emulator software program on our computer to "imitate" a cell phone. With that, we can test our wml files in a "real world scenario".

By now you're probably thinking, "But why would I use an emulator to see my files, when my wml-building software has a "preview" window in it? I'll tell you why...

Emulators are a good healthy dose of reality! Remember that the actual structure of a card is very different from that of a web page. When building your cards, you must always keep in mind that cell phones (and other wireless devices) are not all equipped with a keyboard (some don't even have a full set of letter keys). What can take just over 100 keystrokes to make a simple purchase on the web, can take over 350 button-pushes on a cell phone! By the time you're done with that, you'll put away your phone, wrap padding around your fingers, and have a very clear understanding of how important it is to ensure your cards are as "straight to the point" as possible.

So, even though your work may "look" good in your preview window, you still need to know how is it going to "feel" when you get it on a cell phone. That's where you need an emulator. Since they're setup just like a cell phone (buttons and all), you can get your own "feel" of all the button-pushing your cards are actually going to take. Oh... and did we mention that you may also want to check how your files look on **different** phones... which contain **different** browsers? Yes, they can make a difference, just like in web. But, fortunately, there are a number of different type emulators to match phones as well. For more information and a great list of emulators, check out [Openwave.com](#) (formerly Phone.com).





### *"Picture This!"*

Applications for WAP have come a long way in a very short time. And, as the industry continues to grow, we'll see more and more functionality come to wireless devices. And of course, we're already seeing the addition of graphics to our wml files.

Using WBMPs can really enhance your wml files when used properly. Here again, remembering the limited amount of viewing space on wireless devices, and a goal of minimal navigation requirements, you begin to realize that one small picture may very well be "worth a 1000 words" (well...almost anyway)! Where you might have three or four lines of text, you could, with a little imagination and help from a WBMP program, make an image or two in place of the text.

So, where do we get a WBMP program? Many development programs come integrated with WBMP converters and some even let you create them. There are even some web site which let you convert files right online! Again, which one you choose is a personal preference.

To get you started though, here's a quick list of some very popular programs and what they do:

- [WAPPictus](#) - A jpg/bmp to wbmp converter, which even lets you optimize image size for different end devices. WAPPictus also has a converter you can use online, at their web site!
- [WapTiger](#) - Not as fancy of a program, but simple and gets conversions done quickly.
- [WAPDraw](#) - A program for actually drawing WBMPs and more.



### *"Only Time Will Tell"*

Armed with the information we've covered today, you're all set to get out there and start WAPPING on your own! And, if you find WAP is something you're really getting into, you might think about learning more through the [WAPForum](#). There, you can keep up on the latest news, and even take an active part in the community of building on WAP standards.

There is still a lot of room for growth and improvement in the wireless world. According to some, the market for actual devices has yet to reach the "critical mass", and hardware, software and standards in the industry are still waiting to be recognized. This may be reason enough not to jump on the wireless bandwagon. But, for those of you who like to grasp new opportunities, this may be the best time to get into the industry! Either way, there's no doubt that WAP will touch all of us sooner or later. So, what does WAP have in store for us in the near future? We'll find out in our next article! See you then, and... Happy WAPPING!

-[The KROW](#)

Contributing Writer

[club.coolmaps.com](http://club.coolmaps.com)

**List of Helpful Links for WAP:**

[WapHoleSun](#)

[Coffeecup.com](#)

[WAPTop](#)

[Wapsilon](#)

[Wappy](#)

[m-indya.com](#)

[WAPPictus](#)

[WapTiger](#)

[WAPDraw](#)

[WAPForum](#)

[Openwave.com](#)

[BlueDomino.com](#)

[Ericsson](#)

[Nuance](#)



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Over the past few weeks, we covered basic information about WAP, and how to get started creating your own applications. By now you've had an opportunity to research WAP and hopefully got yourself some of the cool software we've discussed.

This week's final WAP article will cover what's in store for the future of WAP and "where you go from here". We'll cover in depth, examples of hardware and applications that are in use today, and what you can start looking forward to when you create your own applications.



***"Fun Stuff First!"***

For some reason, it seems coolmapians are just tech-oriented. So naturally, it's fun for them to test and try out anything that's the latest, greatest thing! Well fortunately, the cool folks at coolmaps know this and they've created a great little wireless application *you* can try out right now!

Get out those web-ready phones and pda's! Now, take them for a test drive out at:

<http://www.datadrill.com/wap.html>

When you're done, come on back here and we'll see some more cool stuff going on with wireless today! Go ahead.....we'll wait for you.....

So, did you see anything you liked out there? Pretty snazzy stuff, eh? (Are they just gurus or what!) J And that's just an inkling of what's really happening in the world of WAP!



***"The Future Looks Hot!"***

Look deeeep.....deeeep into the crystal ball.....

Well ok, you actually could get a hint just going back to [article 1](#).

There you'd see a list of a few cool wireless applications we use today. And, those applications are enough to really

stir the old brain a bit! But, as any self-respecting 007-wannabe would say, "I'd rather be shaken than stirred. So, where's the *really* cool stuff?" Well, I'm happy to tell you, this isn't the movies, and the *really* cool stuff is here now!

So, what's the *really* cool stuff? Video teleconferencing? Oh please! That's been so "done". Satellite phones? Nope. You probably know about those too. And I'm sure you know about phones that have touch screens, and handwriting recognition, and let us surf the web, and check email.....and send pictures, and shop online.....securely, and serve up most any kind of java we can punch out, and watch videos.....in color.....at speeds up to 2mbps.....and.....(screeching brakes.....).

What?! You didn't know that at this very moment, you could be stranded on the side of the road, watching a color video about changing a tire, at the same time you're letting the Car Club find your location?

Well, peek through that crystal ball and let's see what else is in our future:

How about keyless entry to the doors of our offices? No codes to remember and no smart cards either! I just knew there was something special about that ring on your finger!

What about ordering that coconut drink with an umbrella, a taxi to the mall, lobster dinner for two, and catch Junior's "away game", all from your sunny lounge chair.....and no wires attached!

Of course, the best is being able to check on the kids at daycare, stock up on groceries (without having your scribbled list with you) and start dinner.....all from your cute little cubicle at work! Now *that's* a power-pda if I ever saw one!

Well, if you didn't think wireless devices could do all that....and more, don't feel bad. You're right along side the "critical mass".

Truth is, these features are available now. But, as we [mentioned before](#), if you're in the U.S., you're probably not as aware of these developments. Take heart though (and another glance at that crystal ball), because it may not be long before you find yourself writing advance WAP applications just like these!



**COOL KROW CLUE**

Get your bookmark folder ready! We'll take a peek at stuff you never thought possible! And though nothing here will "self-destruct" in 30 seconds, you most certainly will want to take a double-look at what's happening in the world of WAP!



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*"Catch The Wave, Dude!"*

If you spend any time at all building in WAP, you'll find [Openwave](#) at the center of your work. These folks really stay on top of the WAP community, building new software, offering up-to-the-minute SDKs, and they stay focused on industry standards. Their latest creation? The Openwave Mobile Browser with a color GUI (graphical user interface) that even allows for pen and voice input.



Openwave's new Mobile Browser!

Afterall, life isn't monochromatic!

Previously, we touched on the [Openwave Developer's area](#). Here is where you find answers and support to technical issues concerning WAP. For example, one challenge you may already be experiencing is how do you keep up with all the new WAP devices and services that carriers are sending out to market? The list of details seems endless, but Openwave has resources available to help you sort through it all, and find ways to deploy your WAP applications. Check out their list of [phone references](#) and you'll find gadgets from companies you've probably never even heard of (unless you're in the Telco industry)! Everything from Alcatel to Samsung is listed, and which phone(s) you choose to develop for, will be a matter of preference and requirements.

Another helpful area is the ["Choosing a Markup Language"](#) page. Believe it or not, knowing the browser type/version that you are programming for can make a difference in the version of WML you're coding. Openwave makes it easier to decide if your UP.Browser 4.x will read WML 1.1 and the like.



## COOL KROW CLUE

If you haven't already done so, it might be a good idea to sign up for the Openwave Developer Newsletter. It's mighty convenient to have the latest WAP news come right to your desktop, when you find demand for your WAP services have increased your workload! Think about it. You're deep into a project, and so....when was the last time you got to go out and surf? It's so much easier to have the "good" stuff come to you!



*"Mach 3, 3G's....It All Sets Your Hair On Fire!"*

[3Gnewsroom.com](http://3Gnewsroom.com) is the place you'll want to keep an eye on! Although the name 3G actually stands for "Third Generation", this group could very well be tagged for giving the wireless industry its "mach speed" capabilities.

Though current wireless devices (even global system for mobile comm) transmit at a very low bandwidth, it's the demand for more function from these devices that force the industry to create more robust equipment and applications. This is where 3G comes in.

Relatively new, the 3G networks and devices are estimated to allow speeds between 384 kbps and 2mbps. And though still not as prominent in the U.S., most wireless providers overseas are already working towards this common standard. 3G combines high speed mobile access with IP-based services, thereby creating new ways to communicate. What right now is a rather cumbersome task of getting audio or video just to web, 3G opens the door to a level where bandwidth is no longer an issue (there's a sigh of relief for the multimedia gurus out there)!

The dev community is where 3G really comes into play because the move forward isn't just about cool applications (that used to take up lots of bandwidth), it's now about the convenience of those applications and the speed a task is accomplished. Be sure to keep that in mind when you're building in WAP!

For more information about how 3G came to be, check out:

["How The 3G Alliance Was Formed"](#).



*"Hit Those Books!"*

And you thought the school year was almost over! Well, since many of you already work in this industry, I'm sure you realize that keeping on top of the latest trends, hardware, software, and programming languages, is a constant task. And it's the same in the world of WAP.

The good news is, as the WAP industry continues to "gel"; it's doing so by picking up some good "habits" of our current technologies. For example, we mentioned how WML and XML are already being closely tied together in the WAP world. That's great for those of us who already learned our XML! But, is there any hope for the larger group of people out there who know something like...say...Java??

Now that would be something to get excited about! And the better news still is, YES.....JAVA is working in the wireless world very well. And, it's quickly becoming the mainstream in putting functionality into wireless devices.

If so far, you've been a bit overwhelmed at the thought of creating cool apps for cool devices like we've mentioned so far, don't worry. As you'll see next, you may already have the working knowledge it takes to make WAP work for you!



*"I'll Have A Cup of Java With My Telecon"*

Here's a word you might not have heard of before: JAVA PHONE.

Of course, companies have their own fancy little names for them, but these phones actually function in Java programming!

Now, you may be wondering how we got from WAP to Java phones. But it's worth checking them out since we're already starting to see the worlds of web and wireless move closer and closer together. Did you think a year ago, you'd be writing Java apps for telephones? Well then, there ya go! So, let's take a look at some of the latest and greatest:

### [Samsung's Web Video Phone](#)

This little goodie has more features than you could imagine on one phone! With this phone you'll surf the web, send and receive email (including graphics as attachments) and a host of other things. Want a few of the techie specs?

How's this:

- Internet Protocols: HTML 4.0, HTTP 1.1, HTTPS
- Java Support: p-Java, Java Applets, Java Script
- E-mail: POP3, SMTP
- E-mail Attachments: ASCII / HTML, GIF / JPEG
- LAN: 10-Base T
- More!



Samsung Web Video Phone. Are you "007-ing" yet?

### [Pingtel's xpressa](#)

Though this phone may not be as "fancy" as others, it does boast being the world's first VoIP phone and it runs Java! Some specs here include:

- Up to 1024 simultaneous calls per phone

- Graphical and audio prompt helpers simplify both traditional and next-gen features
- PC application integration
- Java Naming and Directory Interface™ (JNDI) and Java Database Connector (JDBC™) for directory and database integration
- Quality of service support - IEEE 802.1 p and IP ToS bit marking for DiffServe and MPLS networks
- Compatible with Cisco-powered LAN products
- More!



Pingtel's "xpressa" Java phones!

Even more interesting here is the vast resources in [Pingtel's "AppDevZone"](#). There you can join their community and keep up to date on the latest information in this part of the industry. Pingtel's another site you'll probably want to keep an eye on over the coming months!

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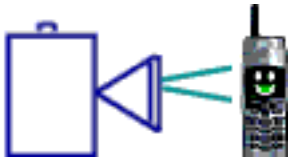
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### *"Inspect The Gadgets"*

Since we're heavy on the subject of Java in WAP, what better place to visit than Javasoft. Specifically, check out their ["gadgets" page](#)! Remember our cool scenario with your "special ring"? Well, this is where you'll find the skinny on that! A note though: Before you get "overly" excited about what you see, take another look at the date (in the URL)!! Now.....how far "behind the times" do you feel?? But, don't worry. Even though those "gadgets" have been out a while, you have to remember that much of the industry wasn't ready until recently, for such technologies. Which brings us to another topic...the best which we've been saving for last.....



### *"Wireless Video Is Upon Us!"*

You've heard the name.....but you've never seen an [Emblaze.com](#) like this before! The newly named "Emblaze Systems" boasts the world's first end-to-end commercial solution for streaming video of wireless networks. Through very strategic alliances, Emblaze has become a world leader by partnering with companies that allow them to offer everything needed to make wireless video a reality. From servers to software to handsets, Emblaze opens a new-age market for the industry.

At the crux of Emblaze, is its servers and encoders which do a lot more than just give customers a place to host their pages! Take a look:



There are three main components to the Emblaze solution. You may be most interested in the "Wireless Device Solution". This allows users to decode and playback video over any other devices like cell phones and PDAs. Through the Emblaze technologies, hardware and software, any wireless device can even receive *live* video transmissions like this:



Just when you thought it was safe  
to go back in the water....  
Now you're on video there too! J

Currently Emblaze technologies are geared only toward high-end commercial uses. What that means is, you're not likely to be able to just download their cool software, buy their server and become an instant streaming video professional. Because Emblaze's technology is so advanced, most of the world just isn't ready for it. Remember, the "critical mass" has yet to even be saturated by cell phones!

But, like every "new thing" to hit market, costs of the Emblaze systems will come down, and its "type" of technology will become more popular. In light of this, it warrants further research on your part as a developer to truly understand what's ahead of you in the *streaming* wireless world.

To see the full gamut of what Emblaze can do, go to [Emblaze.com](http://Emblaze.com) and check out their Wireless Solution Demo.



***"What Are YOU Looking At?"***

Throughout our series on WAP, we've noted how rapidly the industry is changing, and we've seen what's around the corner. By now, you're probably one smart cookie if you're thinking there's a new "fortune" in the world of wireless web! I'd have to wager you're right!

Whether some "suits" of the world choose to acknowledge wireless web technologies or not, doesn't matter. The fact remains, it's coming to a phone near you!



***"Go East Young Man"***

Since you've been here and peered through that wireless crystal ball, your boss may begin to consider you clairvoyant when in 6 months, he sees you've already built a host of applications, ready to deploy to that "critical mass".

But, once you've become the shining star of your office, what will be your encore? Where will you look for more advanced information? Who will be there to fire up your crystal ball one more time? I think The Wiseman says to

"look east"!

With telecom giants like [NTT DoCoMo](#) (cool site, but you'll need a translator!) working together with other very prominent U.S. Telcos, wireless web in North America is a sure thing. And what about DoCoMo's I-mode? I-mode uses cHTML (compact HTML) which is said to be more efficient than WML. Will I-mode overcome WML? It's hard to tell just yet. But, keep an eye open beyond your backyard, and you at least may be ready for any changes that affect your developments!

If you go further east (or west depending on where your flight originates), head over to Europe and check out Ericsson's pages about "[Wideband Code Division Multiple-Access](#)" (WCDMA). Trumpeted as the "wideband radio pipe for 3G", Ericsson is leading the way to bringing those 2mbps speeds right to the palm of your hand! Of course, until you jump on that bandwagon, [Ericsson's pages on WAP](#) development will be a good source for *your* crystal ball as well.

Well, hope you've found this series on WAP informative and a good source to help get you started developing in the wireless world! J

Tune in next time when we'll fire up the ol' crystal ball once again and take a look at the latest rage and easiest way to create "flash" pages.....with SWiSH!

Until then.....happy webbing!

[The KROW](#)

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