

# Best Practices for HTML Email Design

Updated for 2007

You've mapped out your strategy, your message is clear, and your visual design is compelling. The last thing you want is to have a technical oversight negatively impact your email campaign's success. The following guidelines can help ensure that your HTML emails render properly in the widest array of email clients, resulting in better user experiences and higher inbox deliverability rates.

## I. Design Tips

- Place a link in the pre-header to the Web version of the email.
- Include an "add to address book" call to action in pre-header to improve inbox deliverability.
- More email clients are blocking images by default. To combat this trend, include compelling system text messaging to grab the user's interest and encourage them to click "display images".
- Background images should be avoided because they will not display in some email clients, such as Outlook 2007. However, they might still be used with caution if they are not critical to your message, and can be removed without the email recipient noticing the missing image.
- Reverse text treatments (i.e. light text on dark background) should be avoided because some email clients, such as Outlook Web Access, do not support CSS style attributes and text will display as black by default. If this is unavoidable in the design, convert light-colored text to graphical text, remove background color in <td> cell, and be sure to include alt tags.
- Avoid vertically aligned content regions where height is determined by text, since some email clients, such as Outlook 2007, display blocks of text with slightly different leading and kerning.
- Set maximum width to 600 pixels.
- Maximize the approximately 576 x 252 pixels real estate with which you have to work (at 72 pixels per inch). Many recipients view email in the preview pane only, which limits the amount of content visible above the fold.
- Include at least one non-graphical call to action above the fold.
- Design for the potential of large and small font types because not all browser-based email clients have their default type set at medium (or 12 pixels). Aim for a flexible design robust enough to handle font scalability.

## II. Flash & Animation

- Most recipients will not be able to view Flash in HTML emails. It's better to use Flash animation on the landing page rather than in the email. Flash requires the use of either the <OBJECT> tag (Internet Explorer) or the <EMBED> tag (Mozilla, Netscape). Both are parsed from Web-based email programs as there is a potential security risk in allowing their contents to display..
- Animated GIF graphics are not recommended as they do not render in some key email clients, with Outlook 2007 being the most recent program to block them. If they are used, keep in mind that the first frame may be the only one that displays, so your crucial messaging should be captured there.

## III. HTML Coding Tips

- Forms in emails are not recommended due to inconsistent user experiences and results capturing. It's better to use forms on the landing page rather than in the email.
- Do not use frames or framesets.
- Some email clients do not recognize style attributes assigned to the <body> tag, such as background color. To prevent loss of style attributes, place all body content inside a <div> that contains style attributes.
- Email clients may render default colors differently than Web browsers; it may be important to explicitly define color values in order to override defaults. Example, URLs and email addresses (even when not hyperlinked) will appear as links in Gmail and AOL.
- Define style attributes in the nearest <td> or <a> tag.
- Define font size in pixels, not points. Pixel is the Web standard because it is relative to screen resolution. Points are absolute length, and different browsers and platforms may display these values differently. When scaled up or down, pixels may look worse than ems (another relative unit that depends on user's browser settings). However, pixels are still preferred for HTML email.
- Use one or two different font types maximum and provide a sufficient list of alternate fonts in the style sheet specification for a given class of text. The fonts should be listed in terms of: desired, acceptable, generic type (e.g. Arial, Helvetica, Sans-serif).
- Avoid ASCII characters, such as smart quotes, copyright symbol, and special characters. Always use HTML equivalents for ASCII characters.
- Add alt tags to your image tags to ensure the recipient knows it is content even if the image is broken or blocked upon arrival. Using alt tags also satisfies accessibility issues, conforms to W3C HTML 4.01 specs, and allows the disabled to read and receive their emails.
- Avoid using <p> tags as they may create display problems in some email clients. Use 2 <br> tags in its place.
- Avoid simulating horizontal rule with transparent GIFs and background color as Outlook 2007 forces <td> cells to have minimum of 2 pixels height; use CSS to define horizontal rule instead.
- Avoid padding or margin attribute as some email clients, such as Outlook 2007, do not support them.

- Avoid manual breaks, `<br>`, within blocks of content as some email clients, such as Outlook 2007, render leading differently.
- All `<img>` tags should include width and height attributes.
- 1 pixel by 1 pixel transparent GIFs may be "stretched" in order to define custom spacing within table cells. For example, to make `<td>` cells 8 pixels wide, add transparent spacer image and change its width attribute to 8 pixels. However, since some email clients render default spacing for tables differently, it may be necessary to define width (or height) for `<td>` cell as well.
- Stretched images (e.g. bars, gradients, etc.) may not render correctly in some email clients, such as Outlook 2007. All graphics should have their correct dimensions in the file properties. Do not rely on HTML-defined dimensions for images that are critical to the email's layout.
- Avoid empty `<td>` cells and "no wrap" attribute as they may cause display issues in some email clients. Use 1 pixel by 1 pixel transparent spacer graphic instead.
- Avoid empty lines of code and spaces in between an `<img>` tag and `</td>` tag. Some browsers may read this space as an actual space in the overall layout which can lead to misaligned graphics.  
     Your code should be: `</td>`  
     and not: ` </td>`
- Avoid commenting out HTML. Extraneous lines of code should be removed.
- Make sure all your HTML code has been validated and ensure no nesting errors are present. Improper tag closing will cause rendering errors in many email clients. Most HTML editors include a validation utility. Otherwise, go to <http://validator.w3.org/>
- Create complete Text versions for those who prefer not to receive or cannot view HTML.
- There should be adequate testing in popular email clients, such as Outlook, Yahoo Mail, Gmail, Hotmail, and AOL. In addition, always check your code in Web browsers, such as Internet Explorer (versions 6 and 7) and Firefox/Mozilla as well as on both PC and Mac platforms.

#### IV. What about Style Sheets?

- Table-less layouts are not recommended, as it cannot be guaranteed that the email will render correctly in every email environment. Stick with HTML and nested tables – they are still the standard for email.
- Cascading Style Sheets (CSS) work differently in an email body than on a Web page and many email clients do not support them, or support them with inconsistent results. For this reason, we recommend against the use of internal or external style sheets in emails.

The technique with the widest email client support is inline styles. This attribute specifies style information for the current element. For example:

```
<td style="font-family: Arial, Helvetica, Sans-serif; font-size: 11px; color: #313031; text-align: left">
```

While an inline style specifies attributes for current elements, such as `<td>` cells and `<a>` tags, a style sheet specifies attributes for classes, such as `<body>` or `<table>`.

- Inline CSS should also be used instead of <font> tags to cut down on code length. However, if <font> tags are used, they should be used efficiently and at the top of <td> cells, wrapped around all the copy in the cell.
- Never override the user's ability to customize by specifying "important!" in the CSS.

## V. File Size Considerations

- To reduce the likelihood of being caught in a spam filter, email weight should be over 20k.
- For best user and deliverability results, email file size (including dependents) should be 50-100k. However, if the message supports it, the list is well-maintained, coding best practices are used, and regular testing is done, it is possible to successfully send larger, more graphic-heavy emails (200k max).

## VI. Email Client Compatibility

Many people use Web-based email clients such as Hotmail or Yahoo!, or the Web-based version of their home email account such as Earthlink and AOL Mail. For up-to-date browser capability information, go to: [http://www.w3schools.com/browsers/browsers\\_stats.asp](http://www.w3schools.com/browsers/browsers_stats.asp)

- **AOL:** In May 2007 AOL began blocking images by default in the Web-based versions of AOL Mail and AIM Mail. The user may choose to allow images but, until they do, your message and offer will be lost on them unless you use a combination of system text and alt tags along with your graphics. Also, AOL versions 6 and higher will block any emails that link to external style sheets.
- **Outlook:** Outlook is the most common business email client. Microsoft recently released Outlook 2007 and made some fundamental changes to how it renders HTML emails. Although the majority of business email users are still on an older version of Outlook, it won't be long until it is a major player, so understanding its limitations is crucial. An overview of changes is included in this [online article](#).

It is common for corporate users to have images turned off by default as a security precaution, and for preview panes to be used. For this reason, it's important to use system text vs. all graphics, and to have clickable calls to action above the preview pane "fold."

- **Hotmail:** Microsoft has made a few key changes apparently designed to standardize the user experience across their various email clients, reduce spam, and enhance Hotmail's functionality. It is more important than ever to have a good sender reputation, clean lists, and follow design/coding best practices to ensure that your emails make it to the inbox.
- **Gmail:** In Gmail, images are turned off by default. In addition, Gmail organizes and aggregates emails from a single sender that it perceives as related or similar in topic. It refers to the content in these emails as "quoted text" and tends to display only the most recent message from the sender, hiding the other messages unless the user clicks the "view quoted text" link. If you send multiple emails on the same or similar topic, we recommend that you differentiate the subject lines and test in Gmail for display patterns.

- **Yahoo!:** Yahoo! Classic Mail has images turned “on” by default. However, Yahoo! Mail Beta (the new version) has them turned “off.” This new version has been in beta for over a year and it’s not clear when it will replace Classic but, when it does, all images will be turned “off “ by default for all @yahoo addresses.
- **Lotus Notes:** Lotus Notes and Netscape Messenger may not render nested tables correctly. Older versions of Lotus Notes (under R5) will convert HTML email to a Lotus Notes Rich Text format and will not recognize multi-part messages. Later versions of the Lotus Notes client (i.e. R6), congruently running with an older version of Lotus Notes/Domino server (i.e. 4.6), will also render the HTML message incorrectly. **Consider removing references to Lotus Notes.**

## VII. Beating the Spam Filters

- Having clean HTML code can help keep an email from being blocked by spam filters. Web publishing software such as FrontPage, GoLive, or Dreamweaver often add extraneous code that is invisible to the user, but spam filters can detect it and may view the sender as a “sloppy spammer.” In addition, ISPs may direct emails with missing table tags, content below the closing </HTML> tag, or empty <title></title> tags, into the junk folder.
- Additional “spammy” triggers to avoid:
  - » HTML comments which “obfuscate text”
  - » Fonts in the HTML code sized 2+ or larger
  - » Links without a “http://” prefix
  - » Colored backgrounds
  - » Special font colors outside of the 217 “Web-safe” colors

## Results, not rules, are the order of the day

With all these best practices to keep in mind for your email designs, it’s important to remember that these are recommendations, not rules. These are some of the safest and most reliable techniques for coding and designing your email messages. Always keep in mind flexibility of design and testing to back it up. If it’s important to use a questionable practice, for example, test the results first to determine how your list behaves. If the data, sales or responses you receive outweigh the potential functionality issues, proceed with caution and enjoy your success.