

Web
www.rit.edu

R·I·T

About this Document

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The Basics

Overview

Executive Summary

Web standards are vital for any organization and are particularly important for RIT, one of the largest private universities in the nation. RIT's reach spans across a wide array of constituents both nationally and internationally. Understanding RIT's diverse audience is essential to creating a cohesive and consistent graphic identity. The Web is a major component in any communications strategy, offering an opportunity for RIT to reinforce and extend its visibility and identity worldwide.

All organizational entities of the university—including individual divisions, colleges, centers, institutes, and administrative departments—should follow these Web standards and identity guidelines. While created to promote consistency across the “official” RIT Web presence, they also allow creative latitude and individuality for RIT entities while maintaining a visual common ground to RIT as a whole.

“The Basics” section of this document will assist RIT faculty and staff in maintaining the university's identity on the Web, and will guide stakeholders, developers, and content providers in the website creation and maintenance process. Detailed information for Web developers is located in “Advanced Topics.” These standards and identity guidelines are intended for internal use and for external Web development contractors who have been engaged by RIT.

All official RIT websites will follow the standards and identity guidelines set forth in this document. Official university websites include RIT division, college, academic department, and administrative department websites. These standards do not apply to personal websites for faculty, staff, students, or student clubs and organizations.

RIT Rochester Institute of Technology Give to RIT | Directories | Search RIT

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Creating I



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RIT News

[More Stories -](#)

Welcome

- [Prospective Students -](#)
- [Alumni -](#)
- [Community -](#)
- [Companies -](#)
- [Faculty/Staff -](#)
- [Parents -](#)
- [Current Students -](#)
- [Visitors -](#)

Quick Links

- Select destination -

myRIT Login

- [Prospective Students](#)
- [Students, Faculty & Staff](#)
- [Guest View](#)

Photo Spotlight



Hundreds of RIT students gather Wednesday evenings to learn some sign language in the No Voice Zone at the Student Development... [\[more\]](#)

[More photos...](#)

News



Big Shot heads to Churchill Downs
RIT's signature nighttime community photo project returns, this year capturing Churchill Downs, home of the Kentucky Derby, on Oct. 3.



RIT to establish cybersecurity scholarship program
Responding to the national demand for workers highly trained in cybersecurity, RIT will use a National Science Foundation grant to establish the scholarship program.



RIT featured in Google's Year in Search 2014 video
Students and a researcher get a second of fame for creating 3D-printed prosthetic arms.



Men's hockey returns home for pair of league contests against American International this weekend
The RIT men's hockey team returns home, as Atlantic Hockey Conference for American International College comes to the Gene Polheens Center on Friday and Saturday, with...

[Visit University News for more news coverage.](#)

Learn more about January intercession




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[View More -](#)

Events

- January 9-10 [Men's hockey vs. American International College -](#)
- January 9-10 [Women's hockey vs. Robert Morris University -](#)
- January 13 [Graduate Study Open House -](#)
- January 15-17 [Men's hockey @ Sacred Heart University -](#)
- January 17-18 [Women's hockey @ Penn State University -](#)
- January 20 [Women's hockey vs. Syracuse University -](#)
- January 23-24 [Men's hockey @ Bentley University -](#)
- January 24-25 [Break between Intercession and Spring Semester](#)

[See also:](#)

- [events calendar -](#)
- [academic calendar -](#)
- [multicultural calendar -](#)

Brand Identity

RIT has enjoyed a dramatic rise in stature in recent decades. According to brand research conducted on behalf of RIT, the university has done a good job of communicating its message to the external market and its many constituencies. In particular, prospective and enrolling students report that their perception of RIT is of a highly career-focused, specialized, and technological university. The research also points out that there is much to be lost if these perceptions should slip in the external market. Therefore, RIT Web content should continue to reinforce these well-known RIT attributes.

The brand research recommends that broadening and redefining these attributes—through creativity and innovation, redefinition of community, and becoming more globally positioned—will be critical in the future. Additionally, more broadly and effectively describing the aspects of its social and community life advances RIT's aspirational brand.

Brand focus should include innovation, creativity, and collaboration as a defining feature of the RIT experience. Web stakeholders, developers, and content providers should keep the following RIT vision statement in mind as they develop their site:

RIT will lead higher education in preparing students for innovative, creative, and successful careers in a global society.

The following statement, too, supports RIT's vision:

Among the nation's technologically focused universities, RIT is distinguished as a community that generates sparks of inspiration, genius, and ambition; of creativity, perspective, connection, and synergy; and of spontaneity, community, and fun as it prepares students for 21st century career success. The result is a unique blend of rigor and imagination, of specialization and perspective, of intellect and practice that ensures RIT graduates of success not only in a first job, but over a lifetime career.

Specific recommendations from the brand research relating to RIT's Web presence follow:

- All Web, print, and other materials from or about RIT should reflect consistent design, production, and content standards.
- Individual college websites and publications should all be immediately recognizable as divisions of RIT and reflect the larger RIT brand. Guidelines intentionally provide latitude for college websites to be differentiated.
- The university's design, imaging, and printing expertise should be evident in all university-related publications, Web material, and the like.

University Goals

Strategically choosing content for an official website can positively influence progress toward RIT's goals. Accordingly, the website stakeholder and developer should weigh carefully the selection of design, navigation, writing, photography, and video. A few of those goals include:

- Broaden geographical reach, contributing to growth in national and global student, employer, and partner interests
- Embrace and reflect diversity of students, faculty, and staff
- Grow undergraduate and graduate admission applications
- Showcase examples of innovation, creativity, research, and scholarship
- Enhance alumni pride, engagement, and connection to the university
- Grow fundraising
- Grow sponsored research

RIT Web Development Related Contacts

University Web Services

University Web Services is RIT's award-winning one-stop shop for website strategy, design & development and photography needs.

University Web Services
<https://www.rit.edu/webservices>

Raman Bhalla
 Director, University Web Services
 Email: raman.bhalla@rit.edu
 Phone: 585-475-2555

Information & Technology Services (ITS)

ITS is charged with maintaining RIT's Web servers and creating Web accounts. If your department/office doesn't already have a Web presence, you must first contact ITS to create your Web account. Decisions about site URLs are determined by conventions created by ITS. It is also possible to receive redirects where appropriate. See the "Hosting Your Site" section of this document for more information.

Computer account request form
<http://www.rit.edu/accounts>

ITS Helpdesk
 475-4357 (voice) or 475-2810 (tty)

University Publications (UPub)

UPub is the keeper of the RIT graphic identity. Besides the RIT Identity Manual, the RIT Grammar and Style Guide, and numerous other RIT publications, it also creates and maintains many university websites.

University Publications
<http://www.rit.edu/upub>

Ellen Shady
 Director
 e-mail: esccmp@rit.edu
 phone: 585-475-4957

Jared Lyon
 Senior Web Developer
 e-mail: jhlcmp@rit.edu
 phone: 585-475-5031

RIT Web Advisory Committee (RWAC)

RWAC is a group created to help guide RIT's overall Web presence. Members of the committee represent a cross section of RIT's various divisions. The committee is co-chaired by the division of Enrollment Management and Career Services (EMCS) and Information Technology Services (ITS).

Dan Shelley
 Assistant Vice President and Director of Undergraduate Admissions, EMCS
 e-mail: drsadm@rit.edu
 phone: 585-475-7298

Contacts for Assistance

Several areas currently work collaboratively to support RIT's Web presence. Primary areas are University Publications, RIT Production Services, and Information and Technology Services (ITS). The Web Advisory Committee is a campus-wide Web committee charged with guiding RIT's overall Web presence.

For resolution of any questions, conflicts, or concerns about RIT's Web presence, you may contact one of the co-chairs of the Web Advisory Committee:

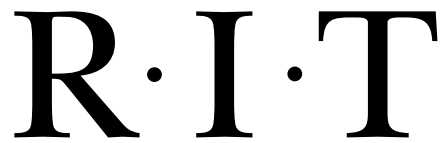
- Dan Shelley, Assistant Vice President and Director of Undergraduate Admissions, 585-475-6736 or drsadm@rit.edu

Before You Start

Before creating or updating any website, it is important to define the following elements: website goal, audience, major tasks, content, and structure/hierarchy.

Determining these areas is vital to the success of any website. Spending more time with advance planning will make the implementation of your site much easier and more efficient. As a general guideline, 80 percent of the work related to a website is done upfront, and 20 percent of the work goes into actual implementation of the site. When updating a site, keep in mind that it's usually best to make small improvements to your site rather than drastic changes all at once.

Before creating or updating an RIT website, it is also important that you plan your site to conform to RIT identity standards and legal requirements. Sources of technical assistance are provided in **Contacts for Assistance**.

The logo consists of the letters 'R', 'I', and 'T' in a bold, black, serif font. Each letter is separated from the others by a small black dot. The letters are centered horizontally and vertically within the page's content area.

R · I · T

Official RIT logo. The logo can be found at www.rit.edu/upub/approved-rit-logos in multiple formats.

The RIT Identity on the Web

Official Logo Graphics

The only RIT logo graphic required for campus-wide use is the RIT logo. When used on the Web, it is required to be at least 90 pixels wide and a single, solid color. The logo can be found at <http://www.rit.edu/upub/logos.html> in multiple formats, including EPS, JPG, and GIF. Other approved logos, including those related to RIT Athletics, require approval from the specific controlling department.

Note: The RIT identity bar, discussed in **The RIT Identity Bar and Other Required Components**, has been created to address the RIT logo requirement. It should be used on all administrative and academic sites.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#\$%^&*()

Sans serif font family: Helvetica

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#\$%^&*()

Sans serif font family: Arial

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#\$%^&*()

Serif font family: Georgia

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#\$%^&*()

Serif font family: Times New Roman

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#\$%^&*()


Serif font family: Times

Typography and Fonts

Unlike in print, font selection on the Web can be limited to the fonts available on each viewer's computer. Because of this, it's best to create Web pages using the most common fonts. Also, because the specified font may be unavailable, developers must provide a font degradation path. Here are some recommended examples, in stylesheet format:

```
font family: Helvetica, Arial, sans serif
```

```
font family: Georgia, Times New Roman, Times, serif
```

RIT Orange Hex #F36E21	
RIT Brown Hex #513127	

The official RIT colors

Black Hex #000000	
Dark Gray Hex #666666	
Light Gray Hex #BBBBBB	
Dark Cream Hex #DFDECB	
Light Cream Hex #F8F7ED	
Dark Red Hex #660000	
Light Red Hex #87080E	

Secondary palette of RIT colors for the Web

Colors

The official RIT colors, orange and brown, are the primary colors for use on all RIT marketing. Consistent use of our colors is key to maintaining a unified brand image and identity. When used on the Web, a hexadecimal value is used to represent these colors.

RIT Orange
Hex #F36E21

RIT Brown
Hex #513127

Secondary Web Colors

A secondary palette is intended for Web use only and provides complementary options that you may choose to use with the official colors. Although developers are free to use other colors on RIT websites, the colors listed here have been chosen because they complement RIT's official colors.

Black
Hex #000000

Dark Gray
Hex 666666

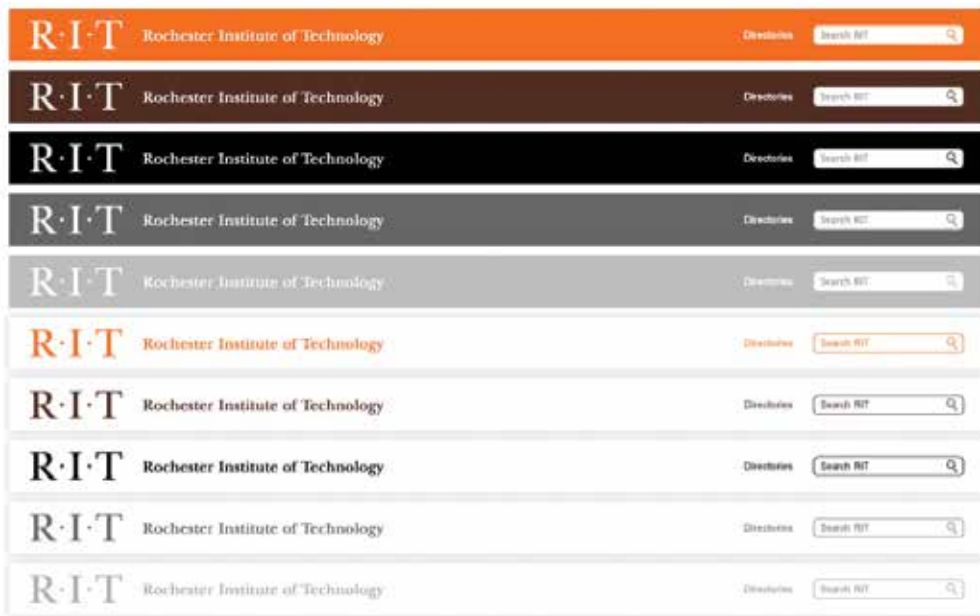
Light Gray
Hex #BBBBBB

Dark Cream
Hex #DFDECB

Light Cream
Hex #F8F7ED

Dark Red
Hex #660000

Light Red
Hex #87080E



Acceptable colors for the RIT identity bar

- #F36E21 (orange)
- #513127 (brown)
- #000000 (black)
- #666666 (dark gray)
- #BBBBBB (light gray)

The RIT Identity Bar and Other Required Components

The RIT Identity Bar

The RIT identity bar should be placed at the top of every official RIT website hosted on the main rit.edu Web server (personal Web pages excluded). University Publications must approve any other graphics or text that developers would like added to the bar. The default is to have the RIT search box. If the site has its own search tool, developers should, to avoid confusion, use a link to the main RIT search page instead of using the RIT search box.

The identity bar is 51 pixels high; it should always appear as such. It must include:

- a solid-color RIT logo at a minimum of 90 pixels wide that links to the RIT homepage.
- “Rochester Institute of Technology” spelled out beside the logo.
- links to the RIT directories and RIT search or search box.

The color options provided for the identity bar to the left are the only acceptable colors.



Two examples of a standard footer created to complement the RIT identity bar



The RIT favicon

Footer Components

A footer should be placed at the bottom of all official websites (personal Web pages excluded). This footer should include a copyright statement, links to the RIT homepage, terms of use (which includes links to the disclaimer and privacy policy), nondiscrimination statement, and copyright infringement information. Any additional footer text and links may be added per site as needed, and background color is flexible.

“Favicon”

A favicon (short for favorites icon)—also known as a website icon, shortcut icon, url icon, or bookmark icon—is a 16x16-pixel icon associated with a particular website or Web page.

To ensure RIT has a consistent look and feel, it is recommended every website use the standard RIT favicon.

College of Science

College Home
 About the College
 Academic Programs
 Cooperative Education
 Facilities
 Advising/Student Services
 Student Life
 Research/Study Abroad
 Alumni Services
 News & Events
 Departments & Contacts
 Admission & Financial Aid

College of Engineering

College Home
 About the College
 Undergraduate Programs
 Graduate Programs
 Cooperative Education
 Facilities
 Advising/Student Services
 Success Stories
 Student Life
 Research/Partnerships
 Alumni Services
 News & Events
 Departments & Contacts
 Admissions & Financial Aid

**College of Applied
Science and Technology**

College Home
 About the College
 Undergraduate Programs
 Graduate Programs
 Online Programs
 Global Focus
 Partnering with Industry
 Giving
 Alumni
 Scholarship
 Faculty Resources
 Facilities
 News & Events
 Other RIT Resources

Samples of navigation from several of the colleges at RIT

Navigation

While navigation from division to division, college to college, or department to department will differ, the elements in common are often much greater than the differences. Each website often serves more than one constituency, making the development of a standardized set of navigation links difficult to achieve. With this in mind, the RIT Web Standards and Identity Guidelines considers the following to be important:

Guidelines and Considerations

1. Generally, main navigation should be kept to a minimum number of items that fit in the top 720 pixels of the page.
2. Navigation should reinforce university goals and priorities.
3. Navigation link nomenclature should be similar to other RIT sites and to other universities, which adds a level of familiarity and speeds visitor information search.

To the left are samples of navigation from the colleges of Science, Engineering, and Applied Science and Technology. Note the consistency from site to site. Clarity and simplicity work to ensure it is easily understood. Due to the ever-changing nature of the Web, the navigations to the left may now appear differently on the sites.

The Office of University Publications
<http://www.rit.edu/upub/archive>

The Office of University Publications produces most of the official print publications for RIT, including the prospectus, college viewbooks, bulletins and RIT Alumni Magazine. Text, as well as most images, may be reused from these publications.

University News Services
<http://www.rit.edu/news/>

University News Services constantly creates news content related to various units on campus. News feeds are available by individual college, division, category, and specific content type to automatically display on your site.

RIT Production Services
<http://www.rit.edu/etc>

RIT Production Services produces many official videos and websites across campus. It also is a repository of RIT photography available for use.

Sources for existing content

Sources for Existing Content

RIT Web developers are encouraged to make use of already existing RIT branded text, photography, and video content: it is simple, reduces development costs, and aligns with RIT's branding messages. The writing, media, and design of these existing assets has been reviewed and approved by many people who are knowledgeable about RIT's brand message and look. The three departments listed below are major sources of existing RIT branded assets.

The Office of University Publications collaborates with all RIT colleges and many divisions and departments across campus on the design and development of RIT's official publications. It, along with RIT Production Services, contracts with many colleges, divisions, and departments in the design and development of official RIT websites. University News Services (UNS) provides ongoing news content and photography for RIT's official websites.

Social Media Guidelines

RIT understands that social media is critical to communicating with and connecting to its various stakeholders. Social media should be used to disseminate important news and information, listen to feedback, and answer questions from our community as well as the general public. Social amplification helps tell the RIT story.

RIT's Social Media Task Force has developed these guidelines to properly portray, promote, and protect the reputation of the university. The guidelines have been created to help develop strategies for RIT social media, as well as create campus-wide partnerships among those who oversee each social media presence. Following these guidelines will help ensure consistent messaging and branding, and offer assistance on how to monitor and maintain engagement with social media.

Advanced Topics

Implementation

Identity Requirements

The university's minimum Web standards require:

- The RIT identity bar (discussed in the previous section), which includes:
 - A solid-color RIT logo at a minimum of 90 pixels wide that links to the RIT homepage
 - "Rochester Institute of Technology" spelled out beside the logo
 - Links to the RIT directories and RIT search or search box
- Standard footer components
 - Copyright statement
 - Links to RIT homepage, terms of use (includes disclaimer and privacy policy), copyright infringement information
- The university favicon

Information on how to implement these requirements can be found at <http://www.rit.edu/framework/>.

Coding and Accessibility Guidelines

Given the Web's increasingly important role in society, it has become essential for website owners to ensure the information they post on the Web is accessible to as broad an audience as possible. RIT is committed to making all of its websites accessible to people with disabilities, including visual, aural, motor, and cognitive challenges. In addition, it is important that RIT websites be accessible to the rapidly growing number of people who access the Web via mobile devices such as cellular phones.

Declare a DOCTYPE

Every Web page developers create should have a DOCTYPE specified. This helps reduce display irregularities across different browsers and operating systems. It is recommended that developers' DOCTYPE be HTML 4.0 and above or XHTML 1.0 and above.

Separate Content from Design

Global design information for developers' sites should be put in a separate CSS style file. If developers require, that information should be placed in the <head> of the specific page. This improves code efficiency, site maintenance, accessibility, device compatibility, and search engine visibility.

Further reading: Why Web standards? <http://dev.opera.com/articles/view/1-introduction-to-the-web-standards-cur/#webstandards>

Provide Text Equivalents for all Important Graphic Elements

All images and image map regions should have their "alt" attribute set for accessibility reasons. Decorative images that do not convey important information should be built into the CSS, rather than the HTML. If this is not possible, include an empty alt attribute (alt="") rather than leaving it out entirely.

Caption all Video and Flash Presentations on Public-facing Websites

Important information can be conveyed in the audio of video and Flash presentations. All videos posted on an RIT website must be captioned or provide equivalent information. Captioning services are available on and off the RIT campus for most forms of media. Please reference the audio/video section of this document.

Further reading: Captioning information, available from PEPNet-Northeast <http://www.netac.rit.edu/publication/tipsheet/captioning.html>

Transcribe/Describe all Audio Elements on Public-facing Websites

Similar to video, all audio must be accompanied by a text transcript or a descriptive equivalent conveying the same information.

Use Descriptive Links

Linked text should always describe the content it links to. Never create a link that says only "click here." Some accessibility programs for the blind will read all linked text on the page, and hearing "click here" will not tell the user what the link means. Furthermore, some users of developers' sites may not even be clicking. For example, instead of "Click here for more information about our faculty," a better wording might be, "Developers can find more information about our faculty on the College of Business website."

Use Label, Fieldset, and Legend to Improve Form Accessibility

The label tag should be used to associate all inputs with their respective descriptions, and the fieldset and legend tags should be used to separate sections of long forms.

Use Tables Appropriately

Tables should be used only for their intended purpose: to display tabular data (such as information from a spreadsheet). Using tables for design or layout purposes is

bad practice, and has a detrimental effect on accessibility. Also, one should use the <th> tag to define headers and use the <summary> tag to provide a summary of the table.

Avoid Using Frames

Frames can cause a number of problems for users with disabilities, especially those using screen readers for the blind. If you must use frames, be sure to include a descriptive title attribute for each frame, as well as a longdesc attribute that provides a more detailed description of each frame's contents.

Ensure that all Information is Easy to Read, Even for Those with Mild or Moderate Vision Problems

Low-contrast color schemes should be avoided (example: light blue text on a slightly darker blue background). Avoid using very small font sizes. Never use bitmapped/graphic text when real text (which the user can resize) could be used.

Do Not Use Color Alone to Convey Important Information

People who are colorblind, for example, will be unable to use a form where required fields are indicated only by red text. Instead, indicate the required field with an asterisk (*), which could also be the color red to further aid non-colorblind people.

Don't Forget Mobile Devices

It is almost impossible to build an effective website that works perfectly on every mobile platform. The screen size, connection speed, browser software, and compatibility with technologies such as Flash and Javascript vary greatly from device to device. However, if all of the previously mentioned accessibility methods are followed, your website is likely to be reasonably accessible on most mobile devices.

Further reading: Implementing style sheets targeted at mobile browsers <http://www.alistapart.com/articles/return-of-the-mobile-stylesheet>



Also note, Adobe Device Central emulates a large number of mobile devices. It is included with newer versions of the Adobe Creative Suite.

Validate Your Pages

Every page you create should be validated to ensure it contains standards-compliant code. Along with DOCTYPE, this helps reduce display irregularities across different browsers and operating systems. The most popular and easiest to use HTML validation service is hosted by the W3C, the international organization that creates Web standards. In addition to HTML, you should also validate your CSS.

Further reading: W3C Markup Validator <http://validator.w3.org/> (for HTML), W3C CSS Validator <http://jigsaw.w3.org/css-validator/> (for CSS)

Perform Browser Testing

Not all Web browsers display sites the same way, so your site could look great on one browser or operating system and incorrect on another. Using proper coding and validation helps reduce irregularities; however, it is strongly recommended that you test your site on some of the most popular browsers and operating systems.

Further reading: *13 Essential Tools to Check Cross-Browser Compatibility* <http://mashable.com/2014/02/26/browser-testing-tools/>

Further notes on accessibility

Campus Web developers are encouraged to read and consider the following resources:

Web Content Accessibility Guidelines
<http://www.w3.org/TR/WCAG20/>
Covers all of the best practices for Web accessibility in detail. Published by the W3C, the main international organization that develops standards for the Web.

How People with Disabilities Use the Web
<http://www.w3.org/WAI/intro/people-use-web/> Provides examples of ways that people with various disabilities use the Web and the difficulties they commonly encounter online.

Mobile Web Best Practices
<http://www.w3.org/TR/mobile-bp/>
The W3C's comprehensive guide to building websites that are accessible on mobile devices.



A sampling of sites using the RIT Web template system

Website Monitoring

Although no formal monitoring policy is in place, RIT websites are subject to periodic informal monitoring. If necessary, action will be taken to assist out-of-compliance site owners and developers in bringing their site into compliance. It's worth noting that even if you have not been contacted, it's possible that your site is not in compliance.

The RIT Web Template System

The RIT Web template system allows users to rapidly create a website on RIT's main Web environment (www.rit.edu) while also maintaining consistency and continuity across all official RIT sites. The system conforms to RIT's standards and guidelines for identity, code, and design.

The website images at left show the efficiency of creating a site in the template system, as well as the diversity allowed. Each of the sites uses the same HTML code structure but with different CSS applied. This provides each site its own identity while keeping the overarching RIT identity.

The RIT Web template system may not be used on personal Web pages or university sites hosted by external commercial entities.

A more in-depth walkthrough of the RIT Web template system can be found on the template system's website <http://www.rit.edu/template/>.

Hosting Your Site

Pros and cons of hosting your site on RIT's main Web server

Pros:

- site can be found via RIT search from any other website on rit.edu
- security updates and scans are performed for you
- only sites hosted at RIT can have the RIT identity bar
- no maintenance, hosting, or domain name fees

Cons:

- custom configurations (ASP, ColdFusion) may be limited
- custom domain names must redirect to your rit.edu url
- turnkey solutions, such as having your site powered by another site, may not be possible

Security

Third-party Applications

It's the responsibility of the site owner to ensure installed third-party applications and related modules are updated and patched. Applications that are not updated are often vulnerable to security problems.

Form Validation

All input received via form needs to be validated to ensure the integrity of the data. Do not rely on client-side validation such as JavaScript. JavaScript can be turned off by the client, which will override your validation rules. Server-side validation should be used to ensure data is input as expected. Some parameters that should be considered include:

- Length of input
- Data types of input
- SQL injections
- Cross-site scripting

For details on what information can and cannot be requested in forms, and other privacy-related issues, refer to **Privacy**.

Databases

When using databases for your website, static queries should be used, if possible. Otherwise, use prepared statements for dynamic queries. Stored procedures and views should also be considered.

Connection strings should never include embedded usernames and passwords. Use Config Vars available through the Webman application to manage your credentials. For more information about Config Vars, please visit the Webman Guide.

Databases should never contain sensitive data such as Social Security numbers. Please contact ITS if your application needs to store sensitive information.

SSL

Any application or website that requires a user to log in needs to use SSL. The official RIT Web hosting environment supports an SSL certificate enabling users to send credentials over https. When `.htaccess` files are used for authentication, the `SSLRequireSSL` directive should be set.

Authentication

(Login-restricted Websites)

Websites or applications should use `.htaccess` for authentication whenever possible. Avoid developing your own authentication. Consult the Webman Guide <https://webman.rit.edu/guide/> for more information on the use of `.htaccess` files for authentication and authorization.

PHP

When developing PHP applications, consider the following:

- Errors should never be displayed in production
- When developing applications in the staging environment, consider password-protecting your site
- Leave `register_globals` set to "off"
- Dynamic HTML content should be encoded using `htmlspecialchars()`
- `Phpinfo()` should never be visible on any public-facing site
- Leave the directive `allow_url_fopen` set to "off"
- Test your PHP applications after upgrades are performed
- File system permissions should be set appropriately. On the official Web hosting environment, 770 is sufficient.

Directories/Folders

Directories should not be browsable. A

browsable directory is one where a default Web page doesn't exist. As a result, all the files in that directory are listed. To stop a directory from being browsable, simply add an empty index.html file.

Audio/Video and Photography Audio, Video, and Streaming Media Standards

Ultimately, the audio, video, and streaming media standards must be dictated by the playback requirements of the given media.

- There are two ways to deliver media over the Internet: streaming and progressive download.
 - o Streaming—provides the media in many small portions from a streaming server to the viewer. One benefit is the ability to scrub through media. It also provides security if the viewer should not be able to save a copy of the media. Requires a special “streaming server.”
 - o Progressive Download—transfers the media to the viewer and stores it temporarily in cache. One benefit is the viewers' ability to download the media to their computers. No special server required; any server capable of displaying Web pages can offer progressive download.
- Consider your audience and their capabilities:
 - o Internet speeds will affect what quality can be acceptably transmitted to viewers.
 - o Software on viewer's computer will determine acceptable media formats.

Formats

There are many formats available for Web media; this consideration is based on viewer's software and encoding qualities:

- Flash (FLV) Format—generally recommended for Web media that features video. Has good compression quality, especially when combined with the H.264 codec. Platform independent since video is typically played in the

Web browser. Quickly becoming widely accepted in Web media due to wide accessibility and a nearly complete feature set.

- Windows Media Format—acceptable quality, best for viewers on Windows computers. Uses latest Windows Media codecs.
- QuickTime Format—wide range of quality, very good with the H.264 codec. Best for viewers on Mac OS computers.
- Real Media Format—good quality with latest codec. Nominal native support; third-party media player download required.
- Other formats include mp4, SilverLight, and others. These are *not* generally recommended.

Quality and Bitrates

Quality of media is directly related to the bitrates the media is encoded at.

- Bitrate is typically measured in kilobits per second (kbps) and while one is specified as a whole, the video and audio are actually encoded at separate bitrates.
- Encoding can also typically be done using two schemes: constant bitrate (CBR) or variable bitrate (VBR). CBR tries to keep the track at exactly the specified bitrate while VBR allows the encoder to use less than the specified bitrate if the media doesn't require as much.
- You can also typically specify how many passes over the media the encoder will do. More passes means better processing, but increases the time it takes to encode the media.
- It is recommended that 2-pass VBR is used when possible.

Resolution (frame size)

This is another factor that determines quality of media containing video.

Generally, the lower the bitrate for the video, the less resolution will be acceptable.

- Media is normally specified in two

different aspect ratios for the frame size.

The 4:3 aspect ratio is for standard media.

16:9 aspect ratio is for widescreen media.

- Web assets are not specifically included in the 4:3 and 16:9 standards, but following those guidelines is recommended.

Frame Rate

Media containing video will also have a frame rate that determines how many frames are stored and displayed per second.

Too low a frame rate will make video look jittery. If your video contains a lot of fast motion, it is recommended you increase your frame rate.

Interlaced/Progressive

Media played on a television will be interlaced, while media played on a computer will be progressive.

- When bringing television media to the computer, remember to de-interlace the media. Not de-interlacing will result in many visible lines over the media during playback on the computer.

Media Bitrates	4:3 Aspect Ratio	16:9 Aspect Ratio	Max Video Bitrate	Max Audio Bitrate	Frame Rate
56kbps	260x195	Not Recommended	40kbps	16kbps	15fps
256kbps	320x240	213x120	192kbps	64kbps	15fps
384kbps	400x300	390x220	320kbps	64kbps	15fps
512kbps	520x390	568x320	448kbps	64kbps	24fps
768kbps	640x480	730x410	640kbps	128kbps	24fps
1280kbps	800x600	920x518	1152kbps	128kbps	24fps

Table of suggested media settings designed for 2-pass VBR of Web media that contains both video and audio

Audio

Media containing audio will have some additional considerations:

- Ensure audio and video are synchronized.
- Ensure the audio is normalized and is at a volume level acceptable for listening on normal speakers.
- Bitrate affects audio, too. See the **Quality and Bitrates** explanation above for recommendations. If your media contains only audio, you can use the entire bandwidth available, but it is not recommended to go above 192kbps. Most modern codecs treat 192kbps as near high fidelity/CD quality audio.
- Audio codec is often determined automatically when video is also part of the media. For times when media includes only audio, you will have to specify the codec to use. The recommended codecs are MPEG 4 Audio Layer (.m4a), MPEG 3 (.mp3), Advanced Audio Coding (.aac), and Audio Interchange File (.aif).
- RIT's standard for video that goes online is Flash Video encoded at 384kbps (video at 320kbps and audio at 64kbps) with 400x300 resolution size and 15 frames per second. This provides acceptable quality-to-performance and should be accessible by the majority of users connecting to the Internet.
- RIT's standard for video that remains internal to RIT or other fast intranets is Flash Video encoded at 768kbps (video at 640kbps and audio at 128kbps) with 640x480 resolution size and 24 frames per second. This provides excellent quality but requires high bandwidth and processing power on the viewer's computer.

Photography

- Typical file formats include JPEG (60% quality or better), PNG, and GIF.
- Dots per inch (DPI) should be 72 or above.
- Source image files or high-resolution files should be provided when sending to others for work.
- A quality guideline would be to ensure that no "pixelation" occurs in an image when it is viewed on screen.

iTunes and YouTube

iTunes and YouTube have specific encoding requirements to maximize the quality of playback. Both will take virtually any kind of video submitted, but their "on-the-fly" encoders can yield very poor results, depending on the original video.

In general, video for these outlets should be created to their specifications to minimize and/or eliminate on-the-fly conversion and/or re-compression.

- iTunes has very specific requirements for best compatibility. When using Quicktime, Final Cut Pro, or Compressor, user-modifiable options are prohibited when exporting to iPod, iPhone, or AppleTV formats. This ensures that files made for Apple devices and iTunes are optimized.
- YouTube lists general size and encoding requirements at its website: <http://support.google.com/youtube/topic/16547>

There are other factors such as frame rate, bit rate, and specific codecs that can influence the quality of the uploaded video. YouTube does support captioning in the Subrip Format (.srt).

Captioning**Captioning Guidelines and Standards**

Captioning for Web-based assets can be placed in several areas. Captioning placement can be in the picture area or below the picture area with various applications. Captioning placed in the picture area is often very difficult to read and has the potential of covering up useful or critical information.

There are numerous delivery methods for Web-based video content. Each method requires a different process to caption the media. Your video could be a progressive download file or a streaming media file. If you use one of the Captioning Resources Services listed below, your video will meet or exceed the standards and guidelines dictated by the FCC and by such organizations as the National Center for Accessible Media, PEPNet-Northeast, the National Captioning Institute, and WGBH Boston.

Please reference the following websites for information on captioning guidelines, accessible digital media, and standards:

Federal Communications Commission (FCC)

<http://www.fcc.org/encyclopedia/closed-captioning-video-programming-television>

The WGBH National Center for Accessible Media (NCAM)

This is a highly recommended site if you want to caption your own media. (Information on Accessible Digital Media—Check Guideline H for video on the Web.)
http://ncam.wgbh.org/invent_build/web_multimedia/accessible-digital-media-guide

PEPNet

<http://www.pepnet.org/resources/tipcaptioning>

National Captioning Institute

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

WGBH Boston

<http://main.wgbh.org/wgbh/pages/mag/services/captioning/faq/>

Captioning Resources On Campus**The Wallace Center****Captioning for RIT Purchased Media**

Romea Montanaro
 475-2015
<http://www.rit.edu/etc/video>

Captioning for Credit Courses

Ian Webber 475-5084
http://wallacecenter.rit.edu/content/course_media.php

NTID Technical Services

Paula Hellaby
 475-4369
NTIDcaptions@ntid.rit.edu

ETC Production Services at The Wallace Center

(Captioning for Non-Course-Related Media)
 Claudia Stata 475-5121
<http://www.rit.edu/etc/captioning>

Captioning Resources Off Campus**Media Access Group at WGBH-Boston**

<http://main.wgbh.org/wgbh/pages/mag/>

National Captioning Institute

<http://www.ncicap.org/services.html?captioning>

Automated Sync Technologies

Provides transcription and text-audio synchronization services.
<http://www.automatichsync.com/captionsync/>

Legalities

Outlined here are brief summaries of common issues related to ownership and permissions for content use on the Web. If you cannot make a reasonable determination of ownership and the rights to use a content asset after reasonable inquiries with the content creators and collaborators, you may contact the RIT Office of Legal Affairs at 475-2426 for more information.

Intellectual Property

RIT's Intellectual Property Policy (C3.0) was adopted to protect the rights of intellectual property creators and should be reviewed by all content creators prior to developing a website.
<http://www.rit.edu/academicaffairs/Manual/sectionC/C3.html>

Privacy

RIT's Privacy Policy was adopted to clarify the legitimate expectations of privacy by those individuals who are present at RIT facilities or at official RIT events, or who use RIT electronic resources. Please read RIT's privacy policy before you develop content for your website.
<http://www.rit.edu/privacy/>

Copyright

Prior to the use of any copyrightable or copyrighted works, you should always first check to make sure that the work is in fact subject to copyright protection. RIT is developing a copyright policy that is consistent with its intellectual property policy. Next, the RIT personnel or student should inquire whether permission authorizing the use of the work has already been obtained by RIT from the copyright owner. If not, permission for use in the website may be sought. Permission may be authorized pursuant to the Fair Use Doctrine, or under the Teach Act for certain Distance Learning applications. A good starting point for answers to copyright and fair use questions can be found at <http://infoguides.rit.edu/copyright>. If you are not sure about interpretation of the copyright law to your proposed website application, please contact the RIT Office of Legal Affairs.

Student-Model Photo Release

A model release form must be signed by anyone whose photo is to be published in any media, granting permission to publish that photo. This encompasses all media, including digital, electronic, print, television, film, and the like. News articles do not require a model release.
http://www.rit.edu/marketing/production/RIT_Model_Release.pdf

Laws on Accessibility

Title I of the Americans with Disabilities Act of 1990 prohibits RIT from discriminating against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training, and other terms, conditions, and privileges of employment.

Section 508 requires federal agencies to make their electronic and information technology accessible to people with disabilities.

See more information on best practices and implementation of accessible websites in **Coding and Accessibility Guidelines**.