

EDG14 DEVELOPING LEARNING RESOURCES

URL shorteners

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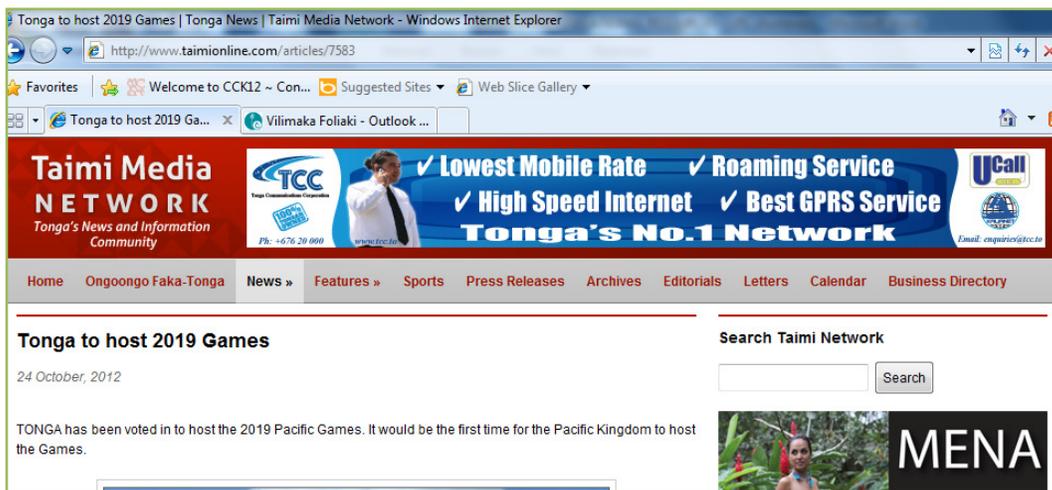
What is URL?

In Computing science, the *Uniform Resource Locator*, or *URL* for short, identifies the specific location of a resource on the web. The statement below from NCThosting (2002-2012) clearly spells out the main role of a URL:

“Its main mission is to identify the location of a document or a program available on the web and specify the mechanism for accessing it through a web browser.”

NCThosting (2002-2012)

In simple terms, the URL is the web address. The URL is divided into parts: the first part is the *protocol identifier* and it shows the type of data transmission format to use; the second part is the *resource name* and this identifies the IP address of the resource.



For example:

The online magazine *Taimi-o-Tonga* has the above news article. The URL for this article is <http://www.taimionline.com/articles/7583>. This same URL is shown below but with the protocol identifier and resource name (domain and file-path) clearly labeled.



What is a URL shortener?

There are billions of resources on the web. To give this large number of resources some degree of orderliness, as well as for them to be useful to humanity, each resource is assigned a unique web address. Consequently, the URL of a specific resource can become very long. This is due not only to the large number of resources on the web but also to the inclusion of characters and attributes that help to describe the resource's nature and specific location on the web.

We come across a lot of URLs in our work in education; in our emails, readings, research, and web experiences. Those of us who use the computer and the internet for work may have realised that it is more difficult to work with long URLs than short ones. First, it is impossible to commit to memory the details of a long URL. Second, there is a higher chance to make mistakes when one copies and pastes a long URL. Last but not least, it is also more likely to send or post a broken URL (which leads to nowhere) when we are working with long URLs.

The above problems can be minimized with a URL shortener. A URL shortener is a web-based tool that can make URLs significantly shorter in length. For example, the URL for our EDG14 storage folder in Box.net is:

https://www.box.com/files/email/myemail@gmail.com/0/f/440482769/1/f_35910006311#/files/0/f/4208023486/EDG14_DEVELOPING_LEARNING_RESOURCES_II.

By using a URL shortening service, in this case I use a tool called *TinyURL*, this long URL has been shortened to:

<http://tinyurl.com/blnozbn>

But it still directs users to the same resource (the EDG14 online resource folder).

Why use a URL shortening service – in teaching?

A URL, as mentioned earlier, contains some very important information about a web-based resource. It contains information not only about the whereabouts (address) of a resource but also some information about how to get to the resource. For someone to get to a desired resource, the URL of that resource must be complete and unbroken.

The completeness of a URL is very important. This means that a URL is unusable if it is incomplete - even if it misses only a single character such as a full-stop or hyphen. A URL is completely useless if it doesn't direct users to the resource that it is supposed to designate.

The above discussion means that the chances for us to make URLs unusable tend to increase when we are working with very long URLs. This problem is common especially in online environments (e.g. websites, blogs, etc) and in online communication platforms (such as emails, discussion forums, etc) in which URLs or hyperlinks are being sent or posted. In addition, long URLs also make an email or a page or a blog post look untidy.

The problems mentioned above mean that the shorter the URL that we work with, the less likely will be for it to be broken or incomplete. Short URLs are also tidy and they take up less space. Therefore, using a URL shortening service can reduce the chances of such problems from happening.

As responsible teachers, we'll always direct our students in the right direction – especially on the web. Further, the rise in the use of online resources for teaching and learning therefore makes learning about URLs and URL shorteners all the more important. By shortening the URLs that you communicate to your students shows that you are making an attempt to ensure that they are being directed to the right resources.

URL shorteners can be also used to conceal some information in URLs which may be too sensitive to be made public (e.g. in relation to the security and/or privacy). For example, the long URL above contains the email address myemail@gmail.com. Such information, when in URLs, becomes accessible to criminal elements on the web. (See the discussion in the next section for more information).

So, be always alert and smart!

1. As shown above, a URL can reveal information which may be private, sensitive or vital to the security of a resource. For example, if we look again at the URL that we've just looked at on the previous page (i.e. the URL for our EDG14 storage folder in Box.net), you'll be able to pull out some very important information. The URL is presented again below for your convenience.

Long URL:

https://www.box.com/files/email/myemail@gmail.com/0/f/440482769/1/f_35910006311#/files/0/f/4208023486/EDG14_DEVELOPING_LEARNING_RESOURCES_II.

By studying this URL, you'll be able to pull out the following key information:

- a) The resource name is "EDG14 DEVELOPING LEARNING RESOURCES II"
- b) The resource is hosted by the "box.com" domain server
- c) myemail@gmail.com is an email address

As mentioned earlier, long URLs can make some important information available for abuse by criminal elements (e.g. spammers and hackers) who lurk in the darkness of the web. Spammers can use the email address for sending spam emails around.

But by using a URL shortening service, however, this long URL has been shortened to:

<http://tinyurl.com/blnozbn>

We can see that in addition to shortening the original URL, all the key information listed above have also been hidden.

2. A lot of people would want to hide the location of a URL – for numerous legitimate reasons. Unfortunately, however, criminals on the web have also taken advantage of this to hide their illegal activities. For example, suppose a dangerous website (such as a porn site) has the URL http://www.porncitybla.bla/bla_bubjksl/klsoensone/ (this is just a made-up URL).

Users of the web (such as parents, teachers, and students) who have some basic understanding of URLs can easily tell (especially from the word "porn") that this URL is suspicious and therefore avoid clicking on it. However, it is easier to become a victim if the URL has been shortened to <http://tinyurl.com/ni>.

So, the important message is: *You shorten long URLs, and you click on URLs only if you trust the source.*

How to use a URL shortening service

There are many URL shortening services available on the internet but some commonly used ones include *TinyURL*, *Bit.ly*, and *Goo.gl*. Just use any search engine (e.g. Google) to search the key word “URL shortener”.

Below are screenshots with the instructions about how to use some of these services:

1. *TinyURL* (<http://tinyURL.com/>)

The screenshot shows the TinyURL.com homepage. At the top, it says "TinyURL.com" and "Making over a billion long URLs usable! Serving billions of redirects per month." Below this are buttons for "Anniversary", "Miss You", "Love", "Birthday", and "Click Here". A "MyFunCards" logo is also visible.

The main section is titled "Welcome to TinyURL!™". It contains a form with the following fields and instructions:

- 1. Click inside and Paste long URL**: Points to the input field labeled "Enter a long URL to make tiny:".
- 2. Click to shorten URL**: Points to the "Make TinyURL" button.
- 3. Wait for short URL to appear**: Points to the area below the button.

Below the form, it says "Custom alias (optional):" and provides an example: "http://tinyurl.com/".

The second screenshot shows the result: "TinyURL was created!". It displays the long URL: "http://www.amazon.com/Kindle-Wireless-Reading-Display-Globally/dp/B003FSUDM4/ref=amb_link_353259562_2?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=center-10&pf_rd_r=11EYKTN682A79T370AM3&pf_rd_t=201&pf_rd_p=1270985982&pf_rd_i=B002Y27P3M".

It then states: "has a length of 223 characters and resulted in the following TinyURL which has a length of 26 characters:"

4. Long URL that was Pasted: Points to the long URL.

The resulting TinyURL is: "http://tinyurl.com/3y2zznp".

5. Tiny URLs produced for you to copy and use: Points to the resulting TinyURL.

It also offers a preview: "Or, give your recipients confidence with a preview TinyURL:" and shows "http://preview.tinyurl.com/3y2zznp".

2. *Bitly* (<https://bitly.com/>)

The screenshot shows the Bitly homepage. It features a search bar with the placeholder text "paste a link to shorten it" and a "Shorten" button.

1. Click inside and Paste long URL: Points to the search bar.

2. Click this to shorten link: Points to the "Shorten" button.

Below the search bar, it says "Just want to shorten links? Bookmark this page. No login required."

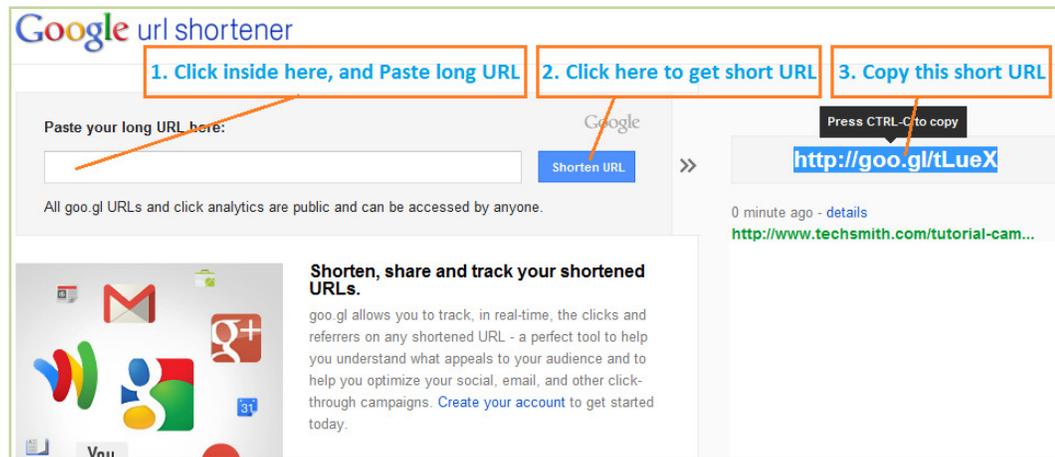
The Bitly logo is displayed in the center.

3. Wait for Short URL to appear: Points to the area below the logo.

The resulting short URL is: "http://bit.ly/3y7nSU".

4. Click to copy shortened URL: Points to the "Copy shortlink" button.

3. Goo.gl (<http://goo.gl/>)



URL unshorteners

So how can we tell the shortened URL which is genuine and safe?

As mentioned earlier, we must first trust the source of the URL.

Further, a related group of tools called URL unshorteners can reverse the effects of URL shorteners and therefore enables you to retrieve the original URL. So, if you receive a shortened URL which you don't really trust, you can copy this URL and use a URL unshorten service to obtain the original URL. Popular URL unshorten services are listed below:

1. Untiny (<http://untiny.me/>)
2. Unshorten (<http://www.unshorten.com/>)

It is also important to know that some URL shortening services (such as TinyURL) also provide a 'preview' version of every shortened URL. When you are sending or posting the 'preview' version of a shortened URL, you are giving recipients the opportunity to check out the features of the original URL and decide for themselves whether to click or not to click the link.

References

1. Long, J. (2009). *The joshmeister on security: How to Preview Shortened URLs (TinyURL, bit.ly, is.gd, and more)*. Accessed 6th Nov 2012: <http://security.thejoshmeister.com/2009/04/how-to-preview-shortened-urls-tinyurl.html>
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3. QuinStreet Inc (2012). URL. *Webopedia*. Accessed 23 Oct: <http://www.webopedia.com/TERM/U/URL.html>.