



DEPARTMENT OF THE NAVY
COMMANDER
NAVAL EDUCATION AND TRAINING COMMAND
250 DALLAS STREET
PENSACOLA, FLORIDA 32508-5220

NETCINST 1500.22
N7

27 SEP 2018

NETC INSTRUCTION 1500.22

From: Commander, Naval Education and Training Command

Subj: NEW STANDARDS FOR CONTENT PACKAGES FOR USE BY NAVY
E-LEARNING DELIVERY

Encl: (1) Standards for Content Development in support of
delivery via Navy e-Learning (NEL)

1. Purpose. To publish new standards for Navy e-Learning delivery and provide policy regarding Hypertext Markup Language (HTML5) and FLASH.

2. Action. Naval Education and Training Command will no longer accept content containing FLASH components (.SWF, .FLA, .FLV, etc.) as of 30 September 2018. All content must comply with the standards in enclosure (1). Content not complying with enclosure (1) will not be delivered via Navy e-Learning. Content under contract for delivery in FY 18 will be accepted, however the content sponsor will document a conversion strategy in Content Hosting and Reports Management Service (CHARMS) detailing the plan to comply with the HTML5 standards.

3. Records Management

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned for the standard subject identification codes (SSIC) 1000, 2000, and 4000 through 13000 series per the records disposition schedules located on the Department of the Navy/Assistant for Administration (DON/AA), Directives and Records Management Division (DRMD) portal page at <https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx>. For SSIC 3000 series dispositions, please refer to part III, chapter 3, of Secretary of the Navy Manual 5210.1 of January 2012.

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b. For questions concerning the management of records related to this instruction or the records disposition schedules, please contact your local records manager or the DON/AA DRMD program office.

4. Review and Effective Date. Per OPNAVINST 5215.17A, NETC will review this instruction annually on the anniversary of its effective date to ensure applicability, currency, and consistency with Federal, DoD, SECNAV, and Navy policy and statutory authority using OPNAV 5215/40. The instruction may be subject to cancellation unless reissued or canceled prior to the 5-year anniversary date.



M. A. WHITT
Chief of Staff

Releasability and distribution:

This instruction is cleared for public release and is available electronically via the NETC public web site, <https://www.netc.navy.mil/directives.htm>, or via HP Records Manager (HPRM).

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STANDARDS FOR CONTENT DEVELOPMENT IN SUPPORT OF DELIVERY VIA
NAVY E-LEARNING (NEL)

1. All courses will be Shareable Content Object Reference Module compliant and run on the Naval Education and Training Command Learning Management System. All courseware must be capable of running on the following minimum software platforms:

Preferred Software Specifications	
Operating Systems:	Windows 7 and 10
Browser:	Preferred: Chrome
	Minimum: HTML5 supported browser

2. Specific content development requirements include:

a. All Hypertext Markup Language (HTML5)-based courses shall be written to the World Wide Web Consortium (W3C's) HTML5 standard at <http://www.w3.org/TR/html5/>.

b. All required tag elements and attributes shall be included. Tag elements and attributes which are deprecated or obsolete in the HTML5 standard shall not be used (<http://www.w3.org/TR/html5/obsolete.html>). The functionality previously provided by the deprecated tag element or attribute shall be replaced by the technique recommended in the W3C's HTML5 standard; for example, the tag is deprecated in favor of Cascading Style Sheets.

c. No new content shall require the browser to function in a compatibility view setting in order to properly display the loaded HTML file.

d. Prior to delivering the prototype or beta courseware, the developer shall test all of their HTML pages with an HTML validator. NeL does not require the developer to use any one particular validator. The W3C's Markup Validation Service at <http://validator.w3.org/> is considered to be the authority on the HTML standard. The W3C's validator will be used to make the final determination by creating a test page that contains the code in question but does not contain any classified or NOFORN content. All pages shall be valid per the HTML5 standard.

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e. The <iframe> element is still allowed in HTML5 and may still be used in courseware.

f. A document type declaration which specifies the document type definition shall appear as the first line of each HTML page (before the <html> tag). The document type declaration for HTML5 is as follows: <!DOCTYPE html>

g. The content type ("text/html") and character encoding of an HTML document shall be indicated with the <meta> tag which must be nested within the <head> section of the document. There are a number of different character encodings that could be used, such as, "UTF-8" is a good one to use. Example: <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">.

h. Plug-ins that are implemented using an <object> tag shall have the codebase attribute of the tag(s) set to an empty string--codebase="--in order to prevent automatically downloading the latest plug-in version. The HTML5 <canvas> element and its associated scripting may be used in place of functionality that was previously provided by the Flash plug-in.

3. Developers will be cognizant of file size to minimize issues of playability across the local network and NeL. An individual web page should be kept at a file size not to exceed 70 kilobytes (kB), and ideally, will not exceed 38-45 kB in size. It is still important to keep individual file size less than 10 megabytes to reduce download time as much as possible. This file size includes the text content and the accumulated graphic content file sizes. HTML compression schemes are fairly efficient through the use of built-in HyperText Transfer Protocol (HTTP) codec schemes. Media developed for courseware must be tested under the following conditions:

- Installed on Navy/Marine Corps Intranet (NMCI) configured media server
- Delivered via NeL
- Displayed in Training Network classroom, NMCI station, or other asset

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4. Acceptable page load times for web-based courseware from the student perspective are from one to five seconds. The following table shows the maximum allowable page size in order to achieve desired response times for various connection speeds.

	10 seconds response time
Modem or mobile	34K
ISDN	150K
Cable/DSL	2M

5. "Page size" is defined as the sum of the file sizes for all the elements that make up a page, to include the defining .html file, and all embedded objects (e.g., image files with Graphics Intermediate Format (GIF) and Joint Photographic Experts Group (JPG) pictures). It may be possible to develop larger page sizes if the .html file is coded to reduce the browser's rendering time.

NOTE: Media developed for ILT-CAI will be easily readable by a student with 20-20 vision positioned in the rear of a typical classroom (The rear of the "typical classroom" is considered to be approximately 30 feet from an image projected on a 60-inch by 80-inch screen).

6. Adobe Animate™ Files. When developing these, the files may be saved as original Flash (.FLA) files for source delivery. However, the final media used within the courseware must be exported out of Adobe Animate™ in a usable form that is not .SWF.

Enclosure (1)