# APIP - IMS Accessible Portable Item Protocol

Most up-to-date version of this document is h ere: <https://www.w3.org/WAI/PF/cognitive-a11y-tf/wiki/Non_W3C#Required_and_Elective_Accommodations_for_systems_with_.22Core.22_Compliance>

## Status:

APIP is only a “proposed standard” with the status of Candidate Final Release. (Draft 1.0 from March 26, 2012) This is a stage at which implementations are necessary to finalize the specification. Implementers including ETS and Pearson have expressed concerns. However, anecdotally from my experience at Pearson, APIP is the most requested user-profile type accessibility standard.

## Purpose of APIP:

An organization would use APIP if they wish to allow tests to adapt to differing user needs. APIP provides formats for storing:

* Meta data about a user
* Meta data about a test or test item
* Alternative content for use in alternative test item presentations

## What it is:

APIP is an exchange format and complex Application Programming Interface (API). APIP compliant tools need to export and import from the exchange format. Tools do not need to use the format for their internal data storage. APIP provides a standard way to exchange a body of information about students and test items, which can be used to make a test adapt to different accessibility needs. The six APIP core use cases address only importing/reading and exporting/creating data files and packages. The only mention of rendering the test in the use case listing is an explanation of the purpose of one of the import/reading use cases, “Obtaining APIP personal needs and preferences – reading a set of personal needs and preferences, from a Preferences System, so that a system/tool/application can be configured to render APIP Items in a manner suited to the personal needs and preferences of the user.” 1

APIP is not a standalone format. It works through extensions to other specifications: “The APIP standard builds on the IMS Question and Test Interoperability (QTI) and the Access for All Personal Needs and Preferences (AfA PNP) specifications.”1

APIP does imply that a particular set of accommodations is important; but, the APIP standard does not provide detail on the accommodations or the related user interfaces: “The APIP standard specifies critical features both for assessment content and for personal needs (e.g., PNP) but intentionally offers limited guidance relative to assessment delivery systems.”2

As such, APIP provides common semantics for accommodations, but does not provide the common vocabulary needed to ensure that any a particular user-need will be accommodated in similar ways by different test delivery systems.

## Required and Elective Accommodations for systems with "Core" Compliance

Core compliance is the main type of compliance. There is a lighter level of compliance called "Entry" which is left out of this table for simplification.

| **Access Feature** | **Test Content/Authoring Supports** | **User Profile (PNP) Supports** | **Test Delivery  Platform Supports** |
| --- | --- | --- | --- |
| A1 Spoken Text Only | Required | Required | Required |
| A2 Spoken Text and Graphics | Required | Required | Required |
| A3 Spoken Non-Visual | Required | Required | Required |
| A4 Spoken Graphics Only | *Elective* | *Elective* | *Elective* |
| A5 Spoken Directions Only | *Elective* | *Elective* | *Elective* |
| A6 Recording Preferences | *Elective* | *Elective* | *Elective* |
| A7 Screen Reader Preferences | *Elective* | *Elective* | *Elective* |
| A8 & A9 Braille information for a refreshable Braille display, including user preferences | Required | Required | *Elective* |
| A 10 References to tactile media (raised line-drawings, manipulatives) | Required | Required | *Elective* |
| A11 American Sign Language (ASL) | *Elective* | *Elective* | *Elective* |
| A 12 Signed English | *Elective* | *Elective* | *Elective* |
| A 13 Translation of the entire content into a different language | *Elective* | *Elective* | *Elective* |
| A 14 Translation of specific words, phrases, graphics, or object descriptions into a different language | *Elective* | *Elective* | *Elective* |
| A 15 Translation of the entire content into another version of the item that uses simpler language | *Elective* | *Elective* | *Elective* |
| A 16 Providing an alternate representation of any piece of information in the question | *Elective* | *Elective* | *Elective* |
| B1 Magnification | Not applicable | Required | Required |
| B2 Magnification amount preferences | Not applicable | Required | Required |
| B3 Reversing the color values of the entire test | Not applicable | *Elective* | *Elective* |
| B4 Alternate text and background colors | Not applicable | Required | Required |
| B5 Alternate Text and Background Colors, Color Preferences | Not applicable | Required | Required |
| B6 Color tint overlay over the content | Not applicable | *Elective* | *Elective* |
| B7 Color tint overlay over the content, Color Preferences | Not applicable | *Elective* | *Elective* |
| C1 Masking off the answers when the item is first encountered | Not applicable | Required | Required |
| C2 Masking certain parts of the test interface or question | Not applicable | *Elective* | *Elective* |
| C3 Playing music or sounds in the background | Not applicable | *Elective* | *Elective* |
| C4 Allowing for additional testing time | Not applicable | Required | Required |
| C5 Allowing for breaks during the test | Not applicable | *Elective* | *Elective* |
| C6 Highlighting key words that need special attention | *Elective* | *Elective* | *Elective* |
| C7 Providing a line-by-line reading tool | Not applicable | *Elective* | *Elective* |
| C8 Color preferences for line-by-line reading tool | Not applicable | *Elective* | *Elective* |
| C9 Language Learner Guidance: Providing extra information to language learners to clarify some information | *Elective* | *Elective* | *Elective* |
| C10 Cognitive Guidance: Providing extra information for some users who need additional cognitive guidance during testing or for something specific within an item | *Elective* | *Elective* | *Elective* |

The table above was pieced together from the following documents to ensure that a simple accessible summary is available:

* Intro Web Page: <http://www.imsglobal.org/apip/>
* Section 1.1.4 of the Best Practice and Implementation Guide: <http://www.imsglobal.org/apip/apipv1p0cf/APIPv1p0_Best_v1p0cf.html#_Toc324341346>
* Appendix A of the Best Practice and Implementation Guide: <http://www.imsglobal.org/apip/apipv1p0cf/APIPv1p0_Best_v1p0cf.html#_Toc324341390>
* Section 3.1 of the Conformance and Certification Documment: <http://www.imsglobal.org/apip/apipv1p0cf/APIPv1p0_Conf_v1p0cf.html#_Toc324254281>
* Appendix A of the Conformance and Certification Document: <http://www.imsglobal.org/apip/apipv1p0cf/APIPv1p0_Conf_v1p0cf.html#_Toc324254286> (Seems to be the best place to find additional description of these features)

## Documents reviewed for this Summary:

1. Overview: http://www.imsglobal.org/apip/apipv1p0cf/APIPv1p0\_Oview\_v1p0cf.html
2. Best Practice and Implementation Guide: http://www.imsglobal.org/apip/apipv1p0cf/APIPv1p0\_Best\_v1p0cf.html#\_Toc324341346