Alternate Scoring Proposal

(from Tim Boland - 20 November 2018
A more detailed but somewhat “contrived” example of use of the scoring mentioned in my previous email follows (numbers are for illustrative purposes only).

BEGINNING OF EXAMPLE:
A web page asking to register dogs is tested against three WCAG 2.1 requirements, alt text (1.1.1), color contrast (1.4.1), and link purpose in context (2.4.4). The tester states the reason for only these requirements being tested for this web page (i.e., wishes of the page author, regulation, type of page, etc.), in one test information field. But any requirements can be tested in theory.
For testing 1.1.1, this web page has four non-decorative dog images on the page; the tester finds that two images have alt text which sufficiently describe their respective images according to the tester, and two images have no alt text. However, the tester has determined that this lack of alt text is not critical to the successful operation of this website by people with disabilities, because full text descriptions of all the images are in paragraph text following the images and referring to their respective images. So the tester assigns a weight for accessibility (w1) of 0.0 for this test, meaning the lack of alt text for certain images does not impede accessibility in any way (users with disabilities can get all the information on the images by other means), and the test result t1 for this test is 2/4 = 0.50 (only 2 of the 4 images have alt text). The tester would state all this information in the same “Test Information” field.
For testing 1.4.1, this web page has four required input fields with introductory text at the beginning of the page saying “Required fields indicated in red”, and with also word REQUIRED before each required field.. The tester finds that all of the following required input fields are in red, but only three of these input fields also have the word REQUIRED in text before the field. The tester has determined that this omission for the fourth required field prevents successful operation of the entire web page, because if a user with a visual disability doesn’t know that this field is required and doesn’t enter anything, a default value will be supplied, which is not what the user intends (all four input fields are interrelated and critical – without accurate input from any one of them the entire input is tainted, maybe without the user’s knowledge if the user has a visual disability). So the assigned weight by the tester for accessibility for this test is 1.0 (critical to accessibility), and the test result t2 for this test is 3/4 = 0.75 (3 of the 4 input fields also have the word REQUIRED, and one doesn’t) . The tester would state this information in the same “test information” field.
For testing 2.4.4, the tester finds that the first seven links on the page (concerning different types of dogs) are important to the web page experience and successful page interaction, and have full link purpose explained in detail in both paragraph text immediately preceding and the link text itself in the same paragraph. The tester also notes that the last three links at the bottom of the page are technical/disclaimer legal language required for every web page from this company (not related to dogs or any other page content), and the link purpose given for them is two paragraphs preceding the referenced links themselves (since the link purpose given for these links is not adjacent programmatically to them, a user with disabilities may not be able

to make the correct associations). Further, the tester finds out that web analytics and three independent data/studies of interaction with this web page by users with disabilities show that only 20% of these users even accessed these three links at the page bottom (even if they had difficulty with these links these links were judged by the tester to be minimally related to the main content of this page), but every one of these users accessed the first seven links which are important to the content of this web page . The tester thus concludes that the three non-associated link purposes may only be a problem for 20% of users and that only marginally important to the main page content , so the weight for accessibility for this test is assigned by the tester to be 0.2, and the test result t3 for this test is 0.7 (7 out of 10 links have link purpose in context, and three don't). The tester would state this information in the same "test information" field.

So the computed score S for this web page against these three requirements using the formula given in my previous email is:

S = ((0.0 x .50) + (1.0 x .75) + (0.2 x 0.7))/(0.0 + 1 + 0.2) = (0.0 + .75 + .14)/1.2 = 0.74

END OF EXAMPLE

NOTE that the values of the weights could be assigned using other factors, and could have other values even greater than 1.0 if appropriate. This is a future research issue.

To determine the meaning of such a score (for example, whether such a score "passes"), appropriate intervals with categorizations would need to be defined.

In the same "test information section, the tester describes the test environment (date of test, content/process being tested, software used to test, requirements being tested, and rationale for test results), in addition to what's mentioned above.

This needs much more thought and discussion. This is meant to be a "framework" to express flexibility, and to be a starting point for discussion.