Evaluation Brief EB19
Selinda Research Associates, Inc.
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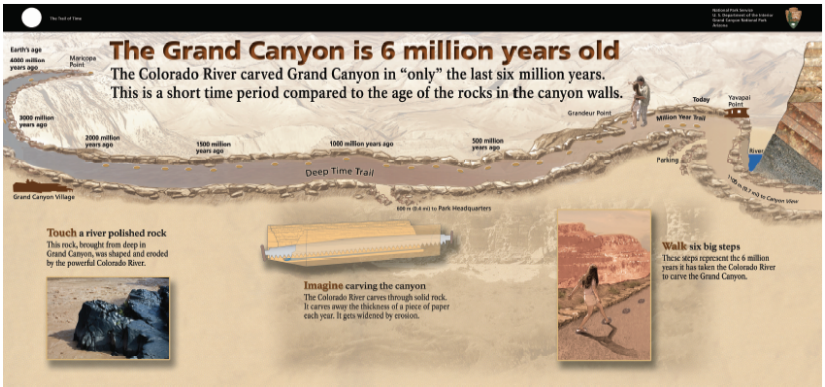
== DRAFT ==

December 2008 Off-Site Testing of Wayside Integration Strips

One of the on-going challenges with the design of the waysides has been how to quickly communicate at a glance that the *Trail of Time* (TOT) is a walking timeline covering two billion years of geologic history, and equally importantly, where in time the visitor is at any given moment.

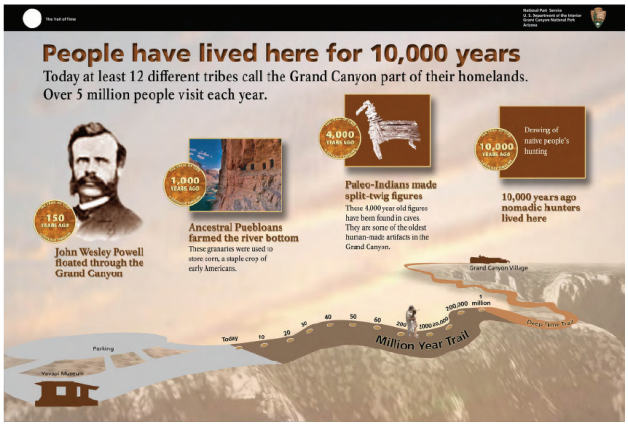
From the beginning, a *Wayside Integration Strip* (WIS) was envisioned as an important instructional tool for orienting visitors to the *Deep Time* portion of the *Trail of Time* (DTT), and providing necessary context. An important function of this WIS was to provide visitors with a familiar, easily recognizable, and consistent device to help them plot their progress as they journeyed along the trail and to serve as a tool to help integrate the TOT experience over time and across rather significant walking distances. Early versions of an abstract rendering of the WIS (see first diagram below) proved problematic and difficult for many visitors to interpret. Although rapid prototyping improved its effectiveness, the development team felt a more polished and realistic version of the trail would better facilitate the visitor experience. A second version of the DTT WIS was developed, followed by a third version. At the same time, it was decided that a comparable WIS was also needed for the *Million Year Trail* (MYT) section.

Early version of the DTT *Wayside Integration Strip* depicting an abstract version of the trail. This version was often referred to as the "plank."



Second version of the DTT *Wayside Integration Strip* showing a more realistic rendition of the trail.

Two depictions of the third version of the DTT *Wayside Integration Strip* showing a realistic version of the trail in context, but with certain abstract features. This version was often referred to as the "google-earth" version.



The first version of the MYT *Wayside Integration Strip*.

Before proceeding with the final designs, the development team wanted to know if visitors would be able to understand the combined realistic/abstract version of the WIS – version 3 DTT WIS, and version 1 MYT WIS. They were also particularly interested in whether the placement of the WIS in the middle or at the bottom was better (see the two depictions of the 6my wayside above.) A complete list of topics explored in this off-site testing is included at the end of this brief. The remainder of this brief summarizes the results of the off-site testing of the third version of the DTT WIS and the first version of the MYT WIS.

Findings and Recommendations

WIS in the middle or on the bottom?

Respondents overwhelming indicated a preference for the WIS on the bottom, indicating that having it there helped ground them and drive home the idea that they were walking along a trail.

> I do not like the trial map at the top.

> Using ergonomics or feng shui or whatever, this one [with the trail at the bottom] this one is better. Because you're on the trail, and you're looking at the bottom of the sign and that's close to the bottom of the ground; it relates to the trail better. It's not out in space or anything. [With the trail in the middle of the sign] you don't get a relationship with the trail. And aesthetically this one [with the trail at the bottom] is better too.

Recommendation: For both the MYT and DTT: have the WIS on the bottom.

Ability of the WIS to communicate

- Of the four main communication goals—(a) it's a timeline; (b) it's an entire exhibition; (c) where am I along the trail; and (d) where am I in the rock column—the goal which was most readily achieved was the first one, i.e. that the WIS represented a timeline. Most respondents were able to readily pick this up, although the non-representational markers were confusing, especially out near Maricopa Point where the markers aren't on the trail.

Recommendation: Figure out a more representational format for the markers.

- The idea that the *Trail of Time* is an exhibition comprised of the *Million Year Trail*, *Deep Time Trail*, and *Early Earth Trail*, was not communicated very effectively, especially with the DTT WIS. The MYT WIS was more effective than the DTT WIS, probably because of the perspective drawing, and also because it included only the MYT and DTT and not the EET.

    What is the intention of breaking up the trail into different colors? I don't understand that.

    Again, is there an explanation of these other trails?

The left side of the WIS in particular was confusing for respondents. Most had difficulty recognizing it as a continuous wrap-around trail. In addition, the 2,000; 3,000; 4,000; Maricopa Point; etc. information tended to be difficult for many respondents.

    That's very confusing. It's too much information in too small a space. [Points to left hand side of DDT WIS.]

    This is really busy. How do you sort this all out? [Points to left hand side of DDT WIS.]

Recommendation: Keep the basic idea of a somewhat abstract perspective depiction of a meandering trail laid across the top of the rim, for both the MYT and DTT. Revise the DTT WIS in particular to more effectively communicate a single *Trail of Time* with two components, perhaps by using a perspective drawing similar to what was used in the MYT WIS (without looking the same). De-emphasize (leave off?) the *Early Earth Trail*. Also, on the MYT WIS consider downplaying the huge parking lot and museum off to the left. Be sure to include the Headquarters trail on both the MYT and DTT WISs.

- Locating themselves along the trail proved challenging for most respondents. Most respondents eventually figured out that they were where the people were standing, but few were able to accurately identify which marker this was. Many respondents suggested that we add a "You are here" bubble.

    Does the image of the people on the trail represent where the viewer is (a "you are here" sort of thing)?

Recommendation: Keep the people on the trail, but add a "You are here" bubble above them. Figure out a better way of labeling the markers so that the year they are standing at is clear.

- The rock column continued to flummox many respondents. Most either didn't notice it, or if they did notice it, they either had no idea what it was about and spent quite a bit of time puzzling over it, or misinterpreted

it as a mountain towering over Yavapai Museum. For the person who did understand the rock column, the scale was disconcerting.

> If you're trying to get a 3D effect that this is part of the canyon's striations here, or geological record, this looks really out of place. It's really out of place. If you're going to do this [points to the rock column] then why isn't this [points to the canyon walls at the left of the sign] the same way? Because you're looking at the layers right here [points to the canyon walls at the left of the sign]. It's really weird [the rock column]. It's completely out of place.
>
> I thought it was a cliff face.
>
> The other thing that makes it weird, is the scale….If you're saying this [the rock column] represents the geological record, you're looking at the geological record here [the canyon walls at the left of the sign] and you don't see [the layers] there.

Recommendation: Keep working. We aren't there yet…..One respondent suggested that instead of having a rock column stuck off to the side, the location in the actual canyon walls should be noted instead.

The effectiveness of the "google-earth" depiction

The existing "google-earth" depiction was inadequate for most visitors, causing significant amounts of confusion, including the misperception that instead of representing a canyon, the drawing was of hills rising above the trail. The rock column on the right contributed to this confusion as well.

> You need to get better art work to create a 3D effect. It's not happening.

Recommendation: Continue with plans to get a better quality image being careful that this new version clearly communicates that you are standing at the edge of the canyon. Test this next version with visitors at the rim. Consider a view from a higher elevation?

A few additional random thoughts:

The pictures/text on the waysides continued to be appealing.

> [The] choice to use three images to illustrate concepts and the fair amount of spacing between the images and textual information [was particularly helpful].

Some concepts that were confusing for respondents were "sedimentary rock," "erosion," and "John Wesley Powell." Respondents puzzled over what these were and why they were important. For example, one respondent had no idea who John Wesley Powell was (this was a PhD student in history) and wanted to know why he was on the sign. In another case a respondent was particularly confused by the Native People's sign, wondering (a) why it's important to know that 5 million people visit the Grand Canyon each year; and (b) whether the trail was about geology or culture.

> What is more important- cultural legacy, or geology? Or are they of equal importance?
>
> [A] definition of "sedimentary rock" is needed.

Recommendation: Be sure to explain all unfamiliar concepts but be careful to use text judiciously. Make a more direct connection between Native Peoples and the geology of the canyon.

Addendum

11/14/08

Plans for Off-site Testing of WIS

Test effectiveness of latest version of WIS. Use two previous versions (abstract plank, and realistic trail) as appropriate.

Test comparative effectiveness of WIS at the top vs. WIS at the bottom.

Test ability of WIS to communicate to visitors:
- it's a timeline
- it's an entire exhibition
- where they are along the trail
- where they are in the rock column

Also test the following questions:
- Are there adequate time markers?
- Can visitors make sense of the relationships between the MYT, DTT, and EET?
- How do they perceive the colors of the different trails (as different trails, as colors of concrete, whatever?)
- On the MYT, does the perspective of standing on the trail with the canyon at their back make sense?
- How can the WIS be made most useful for identifying entrances and exits to trail, distances, connection to Yavapai Geology Museum, shuttle buses, etc.?
- Does the stone lining on the trail help people make the connection between the WIS and the physical trail they will be standing on?
- Literal vs. schematic: Do viewers perceive the WIS as a literal painting of the trail on the edge of the canyon or as a schematic rendering?

You are here graphic:
Do "the people" send the message, or do we also need a "you are here" balloon as well or instead? If visitors don't get that "the people" signify "you are here" on the first viewing, would they get it at the next panel or the next? Should people be looking down the trail, or in the direction of the waysides?