ARIS for Folklorists:
A Best Practices Report on Augmented Reality Interactive Storytelling (ARIS) as an Emerging Technology for Mobile Devices

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Introduction

The *NMC Horizon Report: 2011 K12 Edition* (New Media Consortium, http://www.nmc.org/publications) , an annual report documenting emerging technology trends that affect K12 education, confirms that "people now expect to be able to work, learn, and study whenever and wherever they want." Accompanying this emphasis on flexibility is the growing use of mobile devices (including smart phones and tablets); more than 1.2 billion mobile devices are produced each year, and more than 50% of Americans now use mobile devices, for an ever-expanding range of purposes.

Folklorists need to recognize that these powerful little computers in people's pockets can affect not only the way others experience the world, but also the way that we work and the way we present our research. As more and more applications are developed that allow people to present their experiences through social networking, photo sharing, web-based gaming, and more, folklorists need to enter the conversation about these forms of mediated experiences. We need to assure that our work remains relevant, our training and disciplinary stance compelling and influential, and our next generation of folklorists employable. Right now, applications and authoring environments are being developed for cultural tourism, interactive storytelling, accessing information about cities and landscapes (restaurant reviews, reflections on visits, downloadable maps and brochures), and a wide variety of educational experiences. This is a great time for folklorists to begin to play with possibilities.

With this in mind, the Center for the Study of Upper Midwestern Cultures and the Folklore Program at the University of Wisconsin-Madison proposed hosting a one-day workshop on the Augmented Reality Interactive Storytelling (ARIS) platform for mobile devices. ARIS is an open-source, user-friendly application being developed at UW-Madison (for examples of games/tours already developed with ARIS, go to http://arisgames.org/). This authoring environment allows users to create mobile games, tours and interactive stories with GPS and QR Codes. With ARIS, users are able to create and select audio/video clips, images, etc. to build enhanced tours and/or place-based games to use in their communities—for example, a tour based on neighborhood history or a quest to discover everyday art in a city's downtown. Because this tool's design team (issuing from the Games, Learning and Society research group and the Academic Technology division of UW's Department of IT) is based at the University of Wisconsin, we had the unique opportunity to work with a stellar team of instructors during the workshop.

This report covers both "best practices" in developing a training workshop on an emerging technology, and the beginnings of "best practices" for folklorists using emerging technologies, in this case, the ARIS platform.

Description of the Workshop

Advised by other UW folklorists, workshop coordinator Ruth Olson invited a small group of participants to take part in this interactive workshop on April 1, 2011, to experience an ARIS game and to create games themselves. Working with a small number of participants allowed for more hands-on activity during the workshop. The group also shared their ideas on using such tools as mobile devices for folklore's specialized work in developing cultural tours or for other related purposes, such as place-based educational games.

Instructors

John Martin, University of Wisconsin
Chris Holden, University of New Mexico
Mark Wagler, University of Wisconsin
Jim Mathews, University of Wisconsin

Workshop Participants

Anne Pryor, Wisconsin Arts Board
Carrie Roy, University of Wisconsin
Casey Schmitt, University of Wisconsin
Debora Kodish, Philadelphia Folklore Project
Janet Gilmore, University of Wisconsin
Joan Saverino, Arcadia University
John Fenn, University of Oregon
Natalie Underberg, University of Central Florida
Ruth Olson, University of Wisconsin
Tim Frandy, University of Wisconsin
Tom DuBois, University of Wisconsin
Troyd Geist, North Dakota Council on the Arts

Before coming to Madison for the workshop, we asked participants to do a homework assignment, to be sure that everyone had a small amount of material generated from their own work ready to use, so that we could devote all the workshop time to learning how to use ARIS. (The homework assignment appears at the end of this report). We also sent out the following schedule, to let participants know what to expect.

Planned Workshop Schedule

9:00-9:30	Gather in Memorial Library for coffee and introductions
9:30-10:30	Play part of *Dow Day*, a role-based situated documentary
10:30-10:45	Questions and reflections on *Dow Day*
10:45-11:00	Getting onto ARIS on participants' laptops and distributing iPods
11:00-12:30	Demo of ARIS *editor* to introduce key features.

Walk through steps as each participant begins making a situated documentary
Includes: log in; creating map; developing characters, items, and plaques

12:30-1:30 Get lunch from carts out in Library Mall. Gather back in Memorial Library to eat

1:30-1:45 Play partners' documentaries

1:45-2:15 Jim Mathews shows Middleton example

2:15-2:45 New Ideas – explore ideas for creating more complex "interactive stories"

2:45-4:00 3 Breakout Sessions

- ARIS 101: Back on editor, solidify understanding of basic ARIS features, add additional objects to expand situated documentary begun in the morning
- ARIS "Requirements": learn how to use more advanced features, either to incorporate these features into the documentary begun in the morning or to start a new ARIS documentary/story/game.
- Library Mall Jam – plan a collaborative story set in the Library Mall, go outside to create documents (photos, audio/video clips), return to Memorial Library to put documents into a new Library Mall documentary / game.

4:00-4:30 Reflection: review what we have done, brainstorm how participants may use ARIS back home

Our participants ranged from experienced folklorists with little or no technical training, to those with a fair amount of technical understanding. In part, our workshop was an experiment to see how this mix of professional folklorists would respond to ARIS—how well the platform could be absorbed during this amount of time, what ideas and insights might spring from growing familiarity with the platform, and what feedback we could get both to improve the workshop format and ARIS itself.

It is worth noting that ARIS itself is still under development; our participants were working with an alpha version of the ARIS editor, and thus the instructors found extremely valuable the participants' feedback on where they were experiencing problems and how easy (or not) they found the editor to use. Since the time of the workshop, ARIS has continued to improve and expand its capabilities.

Our workshop schedule ended up evolving as the day went on. It began to snow as we were outside playing *Dow Day*, and we eagerly raced back inside to our room in Memorial Library. As we learned how to log in to the ARIS editor, it became clear that we needed all our instructors to help us independently to manipulate our materials within the editor. Thus, our afternoon schedule did not involve playing each other's documentaries nor having a "game jam" out on the now snow-covered Library Mall. Instead, we kept working on our games, learning how to create characters, items and plaques, and how to link them to places. Those of us who were more advanced went on to learn about "requirements" (advanced settings that allow more interactive play). Our reflection period expanded to more than an hour, as participants discussed their problems, asked questions, and imagined future uses. The workshop coordinator recorded this conversation.

Reflections on the Workshop

After the workshop ended, the instructors and the workshop coordinator created an evaluation form that was sent to the participants. The questions included:

1. Name of game [so we can look at the game drafts] and basic idea/description you had for your game.
2. What texts, photos, video clips, maps, or other materials did you bring to the workshop? Do you wish you had brought something more or different?
3. What did you like about the homework assignment? What would you change to make it more effective?
4. In case we do another ARIS workshop for folklorists, what do you suggest we keep from our workshop, and what would you have us change? Why?
5. Will you use ARIS in the future? If so, in what contexts, and what would be your role (e.g. fieldworker, teacher, game designer, project coordinator)?
6. What is the potential for using ARIS in folklore classes and outreach projects?
7. Other comments

The participants' answers to these questions, especially Questions 3-7, provided us with good material to contemplate, supplementing (and often mirroring) the conversation we had during our scheduled reflection time.

1. Name of game and basic idea/description you had for your game.

Several participants mentioned that before coming to the workshop and playing *Dow Day*, they did not have enough understanding of ARIS to be able to have a good basic idea for their games, especially the differences between a tours, situated documentaries, interactive storytelling, quests, data collecting activities, and ways to guide users' interaction with the environment (through required actions).

2. What texts, photos, video clips, maps, or other materials did you bring to the workshop? Do you wish you had brought something more or different?

Most participants were satisfied with the amount of material they brought. Several felt they brought too much material, which then either burdened them as they tried to go through the basic steps of using the ARIS editor, or which frustrated them because they needed better guidelines for image size and naming and video formatting. One participant commented on the materials he brought, "Mostly the photos of individuals were useful, and less the photos of events, crowds of people, bagpipe playing firemen, union cab parades, marchers, etc. This was a bit of a surprise, because the way we needed to design our game was sort of counterintuitive to the most interesting events of the protest."

3. What did you like about the homework assignment? What would you change to make it more effective?

Most participants agreed that doing a homework assignment before coming to the workshop was helpful; some wanted more time to do the homework; some opted not to do it; some over-prepared. For the most part, it saved time and helped participants focus on using the ARIS editor, rather than taking time to dream up their content within the workshop itself. "It made you think deeply about your topic." "The idea of homework was very valuable. I could imagine sending out as part of the homework the templates for the characters, objects, plaques and having us fill those in to bring to the class online—i.e., an online form to fill out and leave online. Then we could move more seamlessly from taking those digital texts and inputting them into the game during the workshop."

Most agreed that the scope (creating only 3-4 characters, having word limits for the text, etc.) was appropriate and helpful. Most felt that the instructions were clear, although one participant wanted more direction as to how the characters, text and items would be used, and suggested accompanying the homework assignment with an article on game design.

Some felt that if they had been more exposed to the ARIS platform and technology before coming, the homework assignment would have worked better. "It's hard to know what to bring and what to do when you haven't worked with it before, even though I did review a number of the projects online like *Dow Day* and *Bike Box*. It was such a new thing to me that even knowing what I wanted to do changed after I learned more about the program at the workshop." Similarly, some wanted to play more ARIS games before doing the homework so that they could have considered different styles of games before conceptualizing their own.

As one participant wrote, preparing the homework did not necessarily mean a smooth ride while using the ARIS editor. "I was able to work with the 'character,' 'item,' and 'plaque' categories fairly well. But I had very few 'items,' and when certain things seemed like 'items' but were rooted in place, they seemed more 'plaque-like.' The issues that arose when I actually started manipulating materials in the game software: 1) even though I'd made a good stab at confining text to the recommended minimums, my text still could do with a lot of cutting; 2) often the Q&A text consisted of several Q&A sets and potential game steps that I ended up dividing accordingly once I was working in the software." Another issue that could have been addressed in the homework assignment was the size of images; it was suggested that it would have been helpful to have instructions for preparing the images ahead of time (not just naming requirements), or time allotted during the workshop for everyone to work together on re-sizing their images.

4. In case we do another ARIS workshop for folklorists, what do you suggest we keep from our workshop, and what would you have us change? Why?

All participants found the workshop well-organized, and found all the material covered useful. "I appreciated the aim of keeping the focus on simple assignments that would guide learning about basic tools: uploads, etc. That makes sense and was great. I got a terrific amount from the

workshop— certainly enough to come home and try to work on it with others (if I can figure out how to log in again)."

All participants agreed that starting the day with an existing ARIS game aided understanding of the platform and helped to orient the workshop to the tasks and the day. "Playing Dow Day was wonderful, both as an experience of what can work in such a game and as a reality check on what could go wrong. Because we had workshop participants of varying degrees of computer literacy, we saw the gamut of how the game could be experienced. Because it darn snowed and sleeted, we saw the effects of bad weather on one's experience of a game in the open air. Having the game experience and then discussing it afterward was a very valuable part of the event." Some suggested that having even more examples of existing ARIS games would have helped them conceptualize their own games better.

Many suggested a two-day workshop, to allow more time on particular tasks, and to allow people not only to finish creating their games but also to play other participants' games. One participant commented, "While I feel that I accomplished a lot in the single day, I also came in with a bit more technical agility/understanding than other participants; a two-day spread might help differentiate the focus on the 'how' to build in ARIS from the 'why' to build in ARIS." Others echoed the feeling that people who were less technically proficient needed to have more time.

All participants enjoyed the format that allowed people to work on disparate things (different projects, completing tasks at more-or-less individual speed), although some also wondered if it would have been more efficient for everyone to be working on the same game. All enjoyed the small, informal nature that encouraged participants to work together, and to assist each other when all the leaders were busy helping other people.

One section of the workshop where participants felt they needed more time was the task of requirements, which link actions and consequences together—for example, making a character go to a specific place and pick up a specific item in order to trigger the next part of the game. "I felt a 'hinge' moment when we got to the linking. It was new ground for many and related more closely to game design than was the earlier activity (placing plaques), and there were many in our group who weren't yet ready for conceptualizing the game in those terms…some of us made the leap to the new plane, others didn't. The metaphor of seeing the device as more than a deck of cards was a very good one for pushing the envelope: it made us want to do more with the platform than just create a GPS-based PowerPoint, i.e., a customized Google Earth. But somehow, I think the game idea has to be brought up earlier, maybe made part of the homework, so that people have started to conceptualize that before the workshop." One participant referred to the activity of creating requirements as "strategy and theatre vs. static model."

"I found the software very confusing here—the drop down menu tags for designating relationships were baffling and I never completely finished this part to my satisfaction. During this phase, the

'character,' 'item,' and 'plaque' terms became too 'multi-valent.' Especially the plaque idea got me mixed up, when some people who might be resources at a particular location might best be considered plaques instead of characters—or in my case, a building might be a character."

Perhaps one of the most problematic elements of the workshop was including participants of varying abilities. The workshop organizers found this useful for our purposes, as we gauged what people—especially competent, intelligent, experienced professionals who might lack technical skills—could effectively learn in this shortened time frame. But it clearly frustrated some participants—those who had never used a smart phone or similar mobile device—who felt they were being asked to prepare to create a game before they were aware of the environment that game would exist in: "[ARIS] offers exciting possibilities that I was just barely beginning to glimpse." From my perspective as workshop coordinator, I think it is good to bring together people of varying abilities; it reflects more natural educational conditions and allows for valuable conversations ranging beyond technical expertise. The core of these place-based games remains in the concepts rather than in the technology.

5. Will you use ARIS in the future? If so, in what contexts, and what would be your role (e.g. fieldworker, teacher, game designer, project coordinator)?

Most participants indicated they plan on using ARIS in the future, although there was a lot of variance in their enthusiasm. One participant found ARIS still "a bit clunky" to use. "I struggle to see how it'll work [in the classroom]…. It's a lot of instruction time to teach students how to use ARIS. It seems like it would only work if you fully design a course around it, rather than suggesting it as an option. And I think the sort of fictitious narratives that seem the norm for the platform are in fact contrary to good scholarship."

A more positive but still cautious participant wrote, "I'd like to complete what I started first to see what I might take away from it, and whether this is the platform I need for the kind of work I envision. It would have helped to see others' finished products, or even to watch as colleagues put their productions together. I think I would have benefited from others' ideas and creativity. I hope to be able to review the system with our campus ARIS experts to consider how/whether it will work for future possibilities in my cultural landscape classes in particular, but also for exhibits and auto tours."

Others saw more immediate uses: "Yes, I definitely plan on using the ARIS platform in the future across several roles: fieldworker, teacher, collaborator in heritage planning...I think the utility potential is quite great here, and look forward to expanding my exploration of the platform."

"I very much want to use ARIS for a number of projects and have already talked to several festivals about this. One project is to work with the Mah De Hey Trail in the Badlands to provide cultural information along the 100 mile long mountain bike path. I want to do the fieldwork and design and coordination. I've talked with the technology person at the Plains Art Museum about that organization doing something with it in association with their exhibits. And, third, I visited with a

local arts council in Jamestown, ND, about doing an ARIS game in association with a workshop. These projects would be related to tourism and education. I view ARIS not so much as a gaming program but an enhanced cultural tour mechanism for mobile devices. I'm excited to try to put something together. The primary issue for the Mah De Hey Trail is phone and GPS reception. It is likely it is not possible in some areas. That will have to be explored."

Other planned and imagined uses include teacher professional development, a game that complements an existing online novel, and enhancing a museum exhibition.

6. What is the potential for using ARIS in folklore classes and outreach projects?

Again, participants had a range of reactions to this question. Some were quite excited by the potential the platform offers: "Most immediately, I see potential for the ARIS platform in enriching heritage tourism by constructing guided tours augmented with rich media materials gathered via fieldwork (archival and/or new materials). I can also see the tool/platform being useful in the fieldwork stage, as folklorists and community members can 'plot' assets in the ARIS environment as a sort of collaborative interpretive exercise. An extension of this idea, and an echo of the place-based learning ethos, is that community members (students, residents, elders, etc) gain entry into the 'mapping' or representation of cultural materials via ARIS; they can become fieldworkers by learning (via workshops and co-training) the ARIS platform and helping to build games/quests/tours as they work with folklorists to document their communities."

"I think ARIS can be really effective with projects dealing with niche areas since it is so focused; for example, with mountain bikers, with kayakers, etc. However, it has potential to be a great tool to get people out of the classroom and learn about their local environment and community. It could be used effectively also in 'studio crawls.'"

"I think game design is a terrifically useful way to involve a younger generation in learning, and I can see all sorts of uses for the platform in an educational setting. I'd also like to explore using it in outreach situations, especially with teens or young adults. In our game, we are trying to build in two levels: a basic old-person's guided tour of the protests, and a young person's game. I think ARIS holds potential for meeting different user needs or preferences within the same game product."

One participant saw ARIS as an exercise that teachers could engage with during professional development opportunities such as cultural tours; or teachers could help create an ARIS game through content they gathered during something like a cultural tour. Perhaps ARIS could also be adapted as a way to visit a complex web site.

But other participants expressed more caution than enthusiasm for the platform: "I think a more user-friendly version needs to be developed, that integrates YouTube and has more capacity for multimedia projects. ARIS has excellent potential, but it's too time-consuming to want to do."

"Others said that this is a form of media/interaction/content delivery that has become dominant for younger generations. That all may be so, but I'm not sure still that I am…clear on how this can be transformative for a user in the way that actual fieldwork can. (This is not only an old/new technology question: it is the kind of 'so what' question that I always need to ask myself. Other than being cool, how can it move people, engage people with one another and the landscape?)… Most of the people we work with (low-income communities, kids) don't have or use these devices. And I was troubled by the way that using the hand-held device (for a beginner like me) made me interact more with the device than the landscape or people there."

7. Other comments

A number of the participants offered reflections on using this emerging technology and thoughts on best practices. Comments to this question often mirrored or elaborated our discussion at the end of the day; thus I will incorporate some of these remarks into this report's section on cautions and recommendations.

"I am very pleased that I was invited to participate in the workshop. It was exciting, and it really stirred a lot of ideas that could benefit folk arts and help incorporate folk art and folklore into other areas like tourism, economic development, education, and environmental science."

"…[T]here is a lot to contemplate about the 'program' introduced; I find myself periodically drifting into deep thoughts about underlying concepts, terminologies and paradigms, design processes, types of 'audience,' and which audiences/collaborators might respond more productively to process v. production—as I see students perhaps benefiting a lot from 'process,' without heavy expectations for product, while off-campus communities with whom we folklorists work might be more 'product' oriented, but the process might have some interesting unanticipated benefits for folklorist-community collaboration.

"The workshop hosted by the ARIS group and UW folklorists pushed me to think about the potential use of augmented reality and mobile computing technologies in cultural heritage applications such as cultural tourism. The hands-on work of building a "situated documentary" coupled nicely with the reflective conversations the group had throughout the day concerning both how and why folklorists might want to employ these emerging technologies/platforms."

Reflections, Cautions, Recommendations

Part of our reflection discussion centered on ARIS' capabilities and what we as folklorists would find useful in future developments of the platform. We would like ARIS to have: a manual or guidebook with a dummy example to effectively get users up to speed (recognizing that right now there is an online manual and Youtube tutorials); a template that allows a designer to repeat a basic thing in different places throughout the game. It would be helpful for teaching with ARIS to have

some capability to end a game—for example, one based on observation of an environment—with a quiz. If it were possible for ARIS to act like a wiki, then students could create collaboratively.

Different types of mapping should be considered: one participant commented, "How familiar are any of us with building footprints as defining landscape features? We're more used to seeing views as we pass horizontally through space—perhaps footprints could be matched with vertical key profiles of the key buildings we were navigating around. Or maybe a bird's eye type view could help provide a sense of specific places (more of a 3-D view showing that aerial concept, but providing land and buildings with 3-D identifiers)." Another participant suggested mapping the human body; instructors mentioned that QR codes, which provide visual cues that a player can photograph or type in as a word or number code, allow a player to access information in a very small area (unlike GPS locations).

Vocabulary of the ARIS designers (assets, character, Non-Playing Characters or NPCs, items, inventory, plaque, requirements) can sometimes be a barrier for the participants. One participant commented, "I think these terms might best be explained as categories of functions to be used in characteristic ways, with different game type scenarios reviewed. Discussions with colleagues made me consider the potential for applying more familiar folkloristic terms from, say, performance or genre approaches, but I still think 'functionalities' and varied game strategies might be important to review from the get go. For example, several of the applications I had in mind for using this technology require very little strategy, and very little use of 'items' as 'passes.' I realized that my goals were pretty mundane, and I began to wonder if others might find my 'game' extremely boring and tedious—certainly from a gaming perspective. After the presentation of examples from the Middleton school project, I felt that indeed my care to represent real people as they are in their local contexts might seem really bland. That troubled me a lot, as I routinely am so impressed by the actual people I encounter in the field, what they say, and how they explain things. But they are not dressed up as caricatures, as character types in a play, or stereotypes in a game."

Another important concern had to do with access to ARIS games. Right now, any time a game is created on the ARIS staging server, anyone with an ARIS login and password can access it; some participants wanted a way to restrict access to games, especially games that use real research and interviews, to be sure sensitive information isn't shared inappropriately. Instructor Jim Mathews pointed out that there is a way to restrict access to a game to only those you intend to use it, by beginning the game with a plaque that asks for a code word, phrase or number before you can proceed. Still, at least one participant felt that protected access to games should derive from a more fundamental organizational design; i.e., limited access should be the default rather than something achieved through a tool which a beginning game designer may not thoroughly understand.

Beyond the platform's capabilities, participants asked more profound questions: what's the advantage of doing something with a mobile device? What does ARIS do that is unique and that adds value to interactions with place? There needs to be creativity as well as technology for satisfying interactions. The instructors described an artist in San Francisco, who superimposed the landscapes of Baghdad and Palestine over the city, so that as a player traveled through the city, she

would be stopped at points where barriers existed in Palestine, or where a missile had exploded in Baghdad—as a way to obtain a new sense of the landscape stresses in other cities. One participant commented, "[This] example…was inspiring. It helped me imagine how people could use and experience their relation to the landscape in different ways."

One participant asked what made an ARIS "tour" of a place different from a guidebook. Another participant responded that in many ways, it isn't different. But ARIS allows for video and audio, which a guidebook doesn't. ARIS presents one very unique and emerging platform that allows embedding video and other media-rich artifacts into storytelling. It is part of a constellation of ways to engage storytelling, thinking about communities, thinking about place-based education. One also has to consider different audiences—who gets excited about it, who has mobile devices, and who is conversant enough to want to play an ARIS game. So what matters is who is using it. Another participant confirmed that in her experience organizing trolley trips through neighborhoods, older adults wanted guidebooks and younger people wanted to download maps from the web to bring with them. She found that such choices allows opportunities to bring different audiences together, for example, training kids to interview their parents and grandparents in order to put those interviews on a web site. There are all kinds of possibilities as more and more people have these devices. Thus, one possible benefit of creating mobile games is that there are more opportunities for mixed-age groups working together.

Instructor Jim Mathews also said during our discussion that he often doesn't finish playing ARIS games, but he loves designing them. Jim commented that often players don't finish going through an entire game. This troubled one participant, who wrote: "…I'm alarmed that people don't want to finish games. Is this the fault of the designer? Is it the fault of the whole concept of educational games? Is it a generational thing, and people will be more patient with educational games in 20 years? I'm truly unsure. I see a lot of potential for developing games to illustrate chronologies and sequences of events, but I'm discouraged that the plot-based games are not ultimately successful."

But Jim Mathews emphasized that the process of creating was more of a learning experience than actually playing the game. That way, students are not just consuming but producing. He believes that learning begins by having students consider key concepts that inform place-based learning; ARIS is just a way to practice using those concepts. This led to a discussion of game design.

Instructor Chris Holden reflected that refocusing learning on place was a big moment for him. For a Spanish language class at the University of New Mexico in Albuquerque , Chris wanted to make context more relevant to language learning. To do this, he took the class into the Spanish-speaking world in the neighborhood outside the classroom. ARIS helped him create a game that included interactions with Spanish speakers in the real world.

The instructors reminded us: as game designers, we are designing an experience. We have to consider what experience we want the players to have and what actions we want them to perform. We shouldn't focus overly on the technology or on tools as much as we should on concepts. One way to think about design experience is to consider what verbs describe the actions you want the

player to undertake: touring, collecting, observing. Instructor Mark Wagler described an exercise on data collecting that he did with high school students in Middleton. For this "mini-quest" students set out with notebooks and cell phones (to take pictures) to find out if downtown Middleton was a lively, creative place. First, the students were shown cards to see the types of places the teachers wanted them to document. Then the students were assigned roles: ethnographer, photographer, and geographer. After collecting the information, the students created an ARIS game. Jim Mathews added, "When I go out to collect raw assets, I don't want to think they are only for ARIS, they should also be for writing a book or creating a web space." The ARIS game is not the end product; after going through the design process, it is important to have the students debrief, since during the debriefing important ideas emerge.

A participant who primarily does public folklore work asked, who would her audience be? Who gets most engaged with technology like ARIS? What is it effective for? How does learning change by use of it? Another participant responded: there are two things we as folklorists do in our interactions with the public. One is to provide the public with insightful information about situated cultures. The other is to empower people to be ethnographers themselves, something that academic folklorists often stress in courses. It seems that ARIS is much better for the later. Although we come to ARIS immediately thinking it is an interesting form of walking tour, really the strength of it is that it empowers others to create their own ethnographies, and that is how we should try to think, in our programming with communities, with school kids, with elders. Others touted the possibility of collaborative learning and environments where everyone participated equally as learners.

Finally, here is a compilation of recommendations and conclusions from our ARIS workshop:

1. Do not assume potential/actual audience has the relevant "client" technology (in this case, iOS devices w/3g connectivity).

2. Do not assume that if they have it, they want to use it (i.e. the guide book v. iPhone question)

3. Do not assume permanence re: the digital nature of these technologies. A platform here today may be gone tomorrow; migration & transferability are important considerations.

4. Do not equate game design with fieldwork or with the kinds of products folklorists have typically worked on. Game design (as represented through ARIS) requires a different way of thinking. Consider it a gateway to other things—ways of thinking, new forms of interactions, etc.

5. Do not assume that digital technologies will make us better interviewers or project managers. Emerging technologies do not necessarily make our jobs easier.

6. Consider the balance between depth and breadth of place-based info it is possible & useful to convey!

7. Do not force the technology (potential) to drive the narrative/situatedness of the content.

8. Do assume that there will be varying learning curves— across both content producers & consumers (i.e. the creators of the situated docs and the end users)

9. Remember that not everyone has a mobile device or smart phone, and furthermore, older people can find it a challenge to read the little screen on an iPod Touch or smart phone, let alone intuiting what the command icons might mean and using touch as a way to maneuver through commands. If one devotes too much attention to technologies like ARIS, one risks leaving out audience members that don't necessarily have the resources and cash for mobile devices. Those are often the people that we are trying to attract to museums and public art spaces, the people who get more benefit from the kind of work folklorists do. The *Bike Box* project, where you can check out one of these devices, is a good model of a way to include more people in a public art event—making mobile devices available to the public is worth thinking about during a project's design.

10. There is no "one workshop-size fits all." Different learners will approach using this technology in different ways: some students will be satisfied with everyone doing same game; some will want to play with their own stuff. Similarly, storyboarding as a way to plan a game will work for some people but not for others.

11. Knowledge of technology and the availability of devices themselves need to be considered in workshop preparation. Workshop guidelines need to make clear what technology is involved and what its basic requirements are.

12. Future workshops should continue to include homework, perhaps accompanied by a short reading. Workshops longer than one day might be required for participants with little technical experience.

13. Some of our participants who felt they knew the least technology had the most interesting and relevant ideas and insights.

Preparing for the ARIS Workshop:
Homework Assignment

Bring a laptop computer if at all possible. Let Ruth know if you are unable to bring a laptop – she'll either find a laptop for you to use, or you can work with a partner.
While we will have mobile devices for you to use during the workshop, you may also want to bring with you, if available, one or more of the following:

- iPhone
- iPad - preferably a 3G device
- iPod - must be running iOS 4.0 or above (i.e., can't be a 1st Generation iPod Touch)

This workshop focuses on ARIS. Why ARIS?

- It is open source
- It can be downloaded for free from the App Store
- It is easy enough for students, teachers and community members to use
- It already has a number of tours and games available for public use
- It can be played either on-site (with a mobile device) or through Quick Travel (on a mobile device, but off-site)

The Augmented Reality Interactive Storytelling (ARIS) platform is being developed at UW-Madison. As a reminder, you can see examples of games/tours already developed with ARIS at the web site http://arisgames.org/. Make sure you view the demo on this site! You may also want to browse some of the "Featured Products."
Now, to introduce you to some of the vocabulary that the ARIS team uses to describe the scenarios and actions of this platform: This "authoring environment" allows users to create tours, interactive stories, situated documentaries and games for mobile devices that use GPS and QR Codes. At the beginning of the workshop, we will play *Dow Day*, an example of a **situated documentary**. As you will see in *Dow Day*, the audience is introduced to **virtual characters**, who may answer questions, suggest finding certain documents or objects (known as **items** in the ARIS editor) in order to learn more about a situation, or direct the audience to a specific location (created as a **plaque** in the ARIS editor) to talk to someone else or observe something.
In order to give you practice using the ARIS editor, we will be asking you to complete a basic exercise during the workshop, developing content for your own **situated documentary**. We suggest that you choose a place where you already have done documentation—or choose your own neighborhood. Your content does not need to be profound or complex – ANY content that you have prepared will do much better than using our canned content. Most of us will probably use contemporary materials, but ARIS will work equally well with historical places and documents (and even a mix of the two).
If you attempt to find, write, or type text for your situated documentary during the ARIS walk-through, you will likely fall behind the other participants and become frustrated. The same goes for finding or editing photos and audio/video clips. So that your focus can be on learning the technology rather than creating your content (creativity is reserved for later in the workshop!), **we**

ask you to bring the following materials with you, either on a flashdrive, a CD or your computer:

- **A map of the neighborhood in which your "situated documentary" takes place**. This should be a physical copy (photocopy, document printed from Google Maps, etc.) that you can write on. Be sure that your neighborhood map is walkable; that is, distances between points should be short. For example, if you want a 45-minute documentary, users will need to be able to walk to key places and view ARIS content (via their mobile device) in that time frame.
- **At least 6 images relating to your neighborhood.** (For example, head shots of people who are characters in your "documentary"; material culture items: or buildings or landscapes that are important in the neighborhood). These pictures should be jpeg or png format.
- **Text for your "situated documentary." It is very important that the text be <u>digitized</u>** (i.e., created in Word, Google Docs, etc). For the tight writing required in these scenarios: 1) Think sound bites, short sentences. 2) Keep in mind: What's the most important thing you need to get across? 3) Use a conversational tone. You may also want to print out hardcopies of the four sections below (with all the items in each template on a single page), so that you can see how text and photos (and, if you like, audio/video clips) relate in the different types of ARIS "objects" (i.e., items, plaques, and characters), and so that you can quickly find the pieces that fit together.

1. <u>Introduction</u>: Write 1 paragraph about the focus of your "documentary," perhaps emanating from a gathering place in the neighborhood. (We suggest 100 words or less.). Select a photo that represents the "documentary" – e.g., think of the image that appears on the front of a DVD.
2. <u>Character template</u>: Provide the following material for at least 3 virtual characters.
   - → Character's Name (and identity/role)
   - → 1-2 sentence initial greeting – what does the character say when the player first meets them?
   - → Location where we meet the character
   - → Photo: name of the jpeg – this will help you find the photo later. Also, if you print a hardcopy, you may want to embed the photo within the text to help you visualize.
   - → Interview Questions
     - Question #1 (10 words or fewer, but aim for fewer than 10)
       - Answer #1 (aim for fewer than 40 words – ARIS is not ideal for delivering lots of text)
     - Question #2 (10 words or fewer, but aim for fewer than 10)
       - Answer #2 (aim for fewer than 40 words – ARIS is not ideal for delivering lots of text)

3. <u>Item template</u>: Provide the following material for at least 2 items (virtual artifacts that can be held, moved, etc).
   - → Name of Item
   - → Photo of the item: name of the jpeg. Also, if you print a hardcopy, you may want to embed the photo within the text to help you visualize.
   - → Caption for item (about 10 words)

4. Plaque template: Provide the following material for at least 2 plaques (place, building, landscape element).
    - → Plaque Name
    - → Photo of the place: name of the jpeg that represents this location. Also, if you print a hardcopy, you may want to embed the photo within the text to help you visualize.
    - → Plaque Description

- **Short edited audio/video clips are optional and only recommended for people with some experience working with this medium.** While they give zip to a documentary, you can always add them later! Audio clips should be not more than 120 seconds and in .mp3 format. Video clips should not be more than 120 seconds. For video format, note that the file ending is mostly unimportant (mp4, m4v, 3gp, etc.). What is important is the codec used to encode the video: **H.264**.
- Please get in touch if you have questions for any of us!

If all this is leaving you quite blank, let me know and I can send you an example. If you don't have time to pull materials together, Mark and I are creating a set of materials you can use at the workshop (but it won't be as interesting as your own materials).