

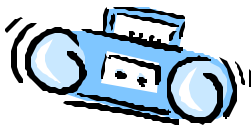
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Last Revision: Oct. 25, 2000

Project Voyager is an endeavor at the MIT Media Laboratory to design and build collaborative, context-aware mobile guides using wirelessly networked palm-sized computers. Voyager guides will have a persistent connection to the wireless Internet, enabling data to be accessed and stored on remote servers on demand—anytime and anywhere. Furthermore, Voyager guides will have access to location sensors such as GPS, providing a convenient method of geographically indexing data and automatically retrieving entries based on location. Finally, Voyager guides will serve as both an authoring tool as well as a browsing application. Thus, users will be able to generate their own content while having access to content generated by other users. These features will enable a wide variety of compelling and exciting scenarios.

What follows is a partial list of scenarios and applications that Project Voyager could enable. The purpose of this list is to aid in the design and implementation of the initial Voyager guide prototypes.

“Living” Audio Guides



If the walls in a building could talk, what would they say? If a person could speak to you from beyond his grave, what would he say to you? Voyager could be used to create “living,” educational guides that would deliver dazzling multimedia content at certain locations. For example, Voyager could be used to create a location-activated tour of a famous graveyard. When you walked next to the graves of certain famous people, an audio track would automatically play back on your Voyager guide (simulating the person speaking to you and telling you about his life). Your screen would also display photographs (or a video) highlighting the person’s accomplishments. Walking through the Zentralfriedhof, a famous graveyard in Vienna, Austria, where famous classical music composers are buried, could become an entirely new experience if your Voyager guide automatically played back Beethoven’s *5th Symphony* when you walked by his grave, or Schubert’s *Die Winterreise* when you passed by his grave. You could also elect to watch a video or see photographs of Beethoven and Schubert, and listen to a narration of their letters describing the process they used to compose their music. Finally, after viewing all that “static” content, you could choose to listen or read commentary left by other visitors, or choose to leave your own and upload it to the dynamic content server over the wireless internet connection.

Voyager guides could also be used to deliver compelling multimedia tours of important historical monuments. When you visit the Lincoln memorial in Washington, D.C., for example, you could hear Lincoln’s Gettysburg address read by James Earl Jones. You could also hear a recording of Martin Luther King deliver his “I Have a Dream” speech when you’re visiting the plaza in front of the Washington Memorial. Memorials would become more exciting and interesting if they could “talk” to you, and Voyager could be the platform to enable that. Finally, you can also download other user’s commentary and read or hear it, and leave your own reaction or commentary for other users to browse.

Mobile Travel Journals

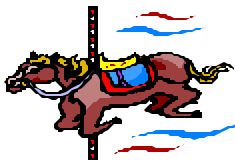


When you travel, how often do you tell a colleague or friend where you ate, how much you paid to get onto the subway, or why you thought the park next to your hotel was absolutely fascinating? Or when you're on a vacation, how often do you wish you'd done your research beforehand so you don't wind up being swindled out of your money at the local "tourist trap?"

Voyager guides can serve as a context-aware, collaborative travel journal where travelers can contribute and retrieve information about a particular site or location. Travelers generate a wealth of information when they visit a new site—from finding great places to eat to locating exciting points of interests. Frequent travelers often know which tourist traps to avoid, how to beat rush-hour traffic, and have other tidbits of advice that are invaluable to other travelers that may be visiting a particular location for the first time. Often, this information is lost—a traveler returns from a trip and information about where he ate, sites that he visited, or advice about the location is not passed on to someone else who would find that information potentially helpful.

Thus, Voyager guides can serve as an interactive, location-aware journal in which a traveler can record their advice and thoughts about a particular site or venue and browse information specific to that site at the same time. For example, a person traveling to Boston could write a review for a particular restaurant and enter it into their Voyager guide. A traveler to Rome could use their Voyager guide to upload their digital photographs and annotations they generated while visiting the Coliseum. Since Voyager guides are wirelessly networked and location-aware, every entry would be automatically location-indexed and uploaded via the wireless connection to a remote dynamic database. Thus, other travelers visiting Boston could read the restaurant review; visitors to Rome could browse other user's photographs and annotations. This scenario becomes extremely compelling for small communities of travelers—for example, people within a particular business could bring up a colleague's journal and learn which subway stops in New York City to avoid. Families could even create their own travel networks and share information and advice about trips—Uncle Ira's information he entered into his Voyager guide when he visited Paris last year becomes extremely useful when Grandma needs to decide what hotel to stay at for her France trip next month.

Theme Park Guides



Imagine being able to visit a futuristic theme park where you know the exact wait time for every ride in the park and can order your lunch and have it ready for you before you get to the restaurant. All your shopping is done electronically, and you never have to pull your credit card out once after you buy your admissions passes.

Voyager guides can provide a context-aware, interactive experience to theme park visitors. Theme park visitors today are given paper maps and brochures that lists show times, places to eat, and shopping venues. They have no recourse for finding out the wait time for certain attractions until they reach them, nor do they have any way of logging their visit other than with their camera.

Theme parks could rent or loan Voyager guides to visitors. Visitors, in turn, could use Voyager guides to access information about show times, view the wait time for a particular attraction in real time to decide what venue to visit next, see where they are on a map, and get directions to another attraction that they would like to visit. Furthermore, since Voyager is aware of the user's location, information about a particular attraction, dining or shopping establishment, or entertainment venue could be automatically displayed on a user's screen when he reaches that site.

Additionally, users could browse theme park restaurant menus on their guides, place their meal orders and have their credit cards automatically charged, and then have their food ready for them when they arrive at the dining location, eliminating the need to have to wait in line (or for a waiter) to order. Finally, visitors can use a built-in digital camera to take photographs and have them indexed by location. Users could download all the data they generated from their trip—photos, annotation, and a location log—before they leave the park so that they can view and edit it in their hotel room or on the web back at home.

Virtual Real Estate Agent



People shopping for a new home often complain about having to deal with push real estate agents or that the descriptions of properties they find in newspapers aren't detailed enough. Furthermore, they're unaware of how a neighborhood is until they actual visit the location, and have no idea how the schools are or where the property is located in relation to supermarkets, stores, restaurants, or parks.

Voyager guides can also be used as "virtual" real estate agents, providing people who are shopping for a home in a particular area with a valuable interactive resource. When a person reaches a particular city or suburb, a guide to the properties specific to that location could be automatically downloaded into the user's Voyager guide. The user would then be able to find directions to a specific property, view information specific to that property, or filter the list of properties further based on personal preferences (e.g. "show me only 2 bedroom single family homes with a swimming pool under \$500k").

Users can also request more information or ask a question about a specific property using their Voyager guide's wireless connection. The message will be routed to the property owner or real estate agent responsible for that particular property. Furthermore, the user could be connected to a live chat session with the real estate agent or property owner if they are online at that time.

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