

## : *What is the status of Pal Mickey?*

For a few days in late July 2004, I was conducting field research with my family at Walt Disney World (WDW). Why Walt Disney World? Mickey Mouse is more than a cartoon animated character. WDW has been operating a large scale, customer-oriented, location aware, knowledge-driven decision support system (DSS) since mid-May 2003. The end user terminal of the DSS is called "Pal Mickey". My goal was to assess the system and to determine how typical "guests" would respond to the DSS. This research project was conducted prior to a University of Florida/National Science Foundation co-sponsored workshop on teaching DSS development that I was lecturing at starting August 1, 2004, in Jacksonville, Florida.

Two major pluses of studying a customer facing decision support system are that a researcher can gather data unobtrusively and one doesn't need the active cooperation of the focal organization that is providing the DSS. My family and I were guests at WDW for the past 3 days and we bought a Pal Mickey so we could "try" the DSS. I attempted to arrange some interviews with Disney IT staff through Media Relations, but I received no response to emails following my initial phone contact. I must admit to some bias in that I do own a few shares of Disney and I am a DSS evangelist as you all know. But for the past two days I have tried to keep an open mind about the Pal Mickey system.

From what I had read prior to the visit, Disney's Pal Mickey product and system seemed like an interesting combination of technologies to enhance "guest" decision making in the WDW theme parks and potentially as a way to provide enhanced data-driven decision support to Disney operations managers and strategists. That last decision support prospect has been especially controversial in some Internet bulletin board postings.

### *What is Pal Mickey?*

According to the initial press release, Pal Mickey is an interactive toy that "keeps Walt Disney World guests entertained and informed in the theme parks." Supposedly "Pal Mickey helps guests get the most out of a Walt Disney World vacation by bringing each theme park to life as a helpful tour guide. The huggable plush toy offers reminders about parades and show times, shares stories and trivia, recommends attractions, plays games and tells guests where to locate Disney characters. Each 10 1/2-inch Pal Mickey responds in all of the Walt Disney World theme parks." Pal Mickey was developed "by Walt Disney Imagineering using advances in wireless communication."

In January 2004, Debra D'Agostino's interview with Bruce Vaughn, vice president of research and development for Disney Imagineering, appeared in CIO INSIGHT. Vaughn noted "We didn't want to have it say the same thing over and over again, so there's a small computer in there that's making decisions. You can unlock things by the more experience you do, so the more you do, the more the toy has to tell you.

"Pal Mickey has touch sensors in his hands and stomach. He has a speaker box inside his head. Pal Mickey has an infrared receptor in his hard plastic nose that detects and reads transmissions from more than 600 fixed transmitters located in the four parks. He receives an update each time he passes through a park main gate turnstile. Pal Mickey has almost 100 minutes of audio and has over 700 different messages.

If you switch Pal Mickey off, his memory resets so he "forgets" where he has been. According to MousePlanet, Pal Mickey "also resets after several hours in a park, when you visit a new park, or when he experiences certain attractions. Because his jokes are tied to a specific part of each park, he tends to tell the same ones over and over again until you move to a new section of the park." Also, MousePlanet reports "Some attractions use infrared technology that can disrupt Pal Mickey's

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operation." Two such rides that interfere with Pal Mickey are Test Track and Tomorrowland Transit Authority.

*How was data gathered?*

Thursday at about 1:00 pm I started my quest to determine the status of Pal Mickey. My 9 year old son and I purchased a Pal Mickey at the Settlement Trading Post at Disney's Fort Wilderness resort and campground for USD \$60. The rental price was \$8 per day. The store had 4 units in stock and a cast member showed us how to turn it ON and OFF.

Most of the rest of Thursday I tried to establish a reliable Internet connection for my portable PC so I could check email and post news stories at DSSResources.COM. First I tried to find a high-speed wireless connection at the Contemporary Hotel. After some failed connections and a call to the help line it became clear I needed a different wireless card. Finally, I gave up on a high-speed hookup and I've been relying on a phone modem. WDW is not on the leading edge of Internet access for guests.

Friday morning my wife and children got up early to enjoy WDW and try Pal Mickey. They are "typical" guests and willing participants in my study. Tough duty, but someone had to do it. My wife Carol hooked Mickey to her belt and the group headed off to Animal Kingdom. I'll summarize their experiences and observations later in this Ask Dan!

My plan for Friday was to visit all four parks and observe and interview guests with Pal Mickeys and interview cast members in stores selling Pal Mickeys and cast members working at park entrance gates.

At about 9:30 am Friday I started observing guests entering the Magic Kingdom. After about 15 minutes and probably a thousand guests I had observed only one family with a Pal Mickey. The cast member I chatted with indicated that ratio was about average. After a ride on the monorail to EPCOT I observed guests there. I spoke with a security officer who had used a Pal Mickey once and his only complaint was that it was often hard to hear the dialog. I only observed 1 family entering with a Pal Mickey in a 15 minute period. Both children in the family had Pal Mickeys. A cast member at a Disney store said she rented about 2 units per day and sells about one every 2-3 weeks. She had never had any complaints. Price was an issue with some guests. I asked a number of people if they had heard of Pal Mickey and the recognition level was generally high. The main objection I heard was the park maps are good ... so why do we need one. A guest commented it seems like Pal Mickey is only one more thing to carry.

By noon I was at Animal Kingdom observing guests. During 15 minutes at the entrance gate I did not observe any units. While waiting at the bus stop to go to MGM I did speak with a woman who had a Pal Mickey she had purchased in May on an earlier visit. She was enthused about the product and explained how a cast member at a Disney store had updated the data and programming of her unit at the start of the current visit. I did not observe any Pal Mickeys during a 15 minute period at the gates to MGM. On my way back to Fort Wilderness, I stopped at the Wilderness Lodge and went to the Mercantile store. The cast member in the store showed me a Pal Mickey. We chatted about the product and she indicated that "sales had been pretty good initially especially to cast members but they have trailed off. People were standing in line to get one."

Saturday morning the wife and kids took Pal Mickey and were off for a long day in the parks. I took a boat over to the Magic Kingdom for a final search for Pal Mickey. I spent about a half hour observing at the entrance gates and I struck out! No Pal Mickeys. I did chat with a security guard and he said

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many guests had Pal Mickey dolls. As I quizzed him about security and checking Pal Mickey dolls he retreated on the number of guests carrying the doll into the park and acknowledged that few guests brought in Pal Mickeys to the park. He acknowledged that Pal Mickey would probably set off the alarms on the new security screening system WDW is planning to install. He was uncertain about the effect of the security system on the Pal Mickey technology.

Saturday afternoon I chatted with a cast member about Pal Mickey and she said "Let me tell you a secret. You should buy one of the Pal Mickey's now because it will be replaced soon." She didn't know any details. She speculated the new Pal Mickey would look different, would have a wardrobe including a raincoat, and would have some new features and technologies. She thought the new Mickey would be released in 2005 as part of the 50 year anniversary celebration of DisneyLand.

Overall I discovered that Disney Pin trading was a good way to meet cast members and start a conversation about Pal Mickey. My pin collection will be a lasting memory of all of the nice people I met at Walt Disney World.

*What were the findings of my "typical guest users"?*

My oldest son Alex was a diligent counter of Pal Mickeys. At Epcot and Magic Kingdom on Friday he saw 4 guests with Pal Mickeys. He concluded "It is a good idea that wasn't executed as well as it should have been. It seemed as if there were more ads for Pal Mickeys in the parks and on the buses than there were Pal Mickeys."

My youngest son, Greg, grew most attached to Pal Mickey. He liked the talking toy aspect of the product. He noted "I liked playing the games while waiting for the buses."

My wife Carol was most often the one who carried and cared for Pal Mickey. Friday night she reported "it was hard to hear, it was at times irritating -- sometimes it didn't seem to be saying anything." Pal Mickey shut down for an hour in the middle of the afternoon. On Saturday at Epcot it did say some useful things. "After riding the Test Drive it shut down and we went to the camera store to have it checked. The only thing of use it told me was an hour before Fantasmic was to start. I couldn't hear anything from Pal Mickey in Magic Kingdom. Even when it started to shake and I held it to my ear there was too much background noise."

My sixteen year old son Ben was intrigued with Pal Mickey and was trying to come up with ideas to make the system more useful. He noted "I think it would work better if it came with a backpack that you could put over your shoulder. Also, I think that with more sensors and more information it would be more helpful and it needs to work throughout the park. It has potential."

Altogether my family encountered about 20 Pal Mickeys in approximately 28 hours of park hopping. Their overall ratings of Pal Mickey were: Carol = D+, Alex = D+, Ben = C+, and Greg = C.

*What is my evaluation of Pal Mickey as a decision support system?*

The user interface is simple to use. It is designed for use by 9 year olds. The output from the speech system is hard to hear in the noisy confines of a theme park. Pal Mickey shuts down inexplicably at times. The advice is often too general.

The communications infrastructure seems inadequate and inflexible. Relying on fixed position infrared transmitters may be cost effective, but it is limiting. The concept of a location aware DSS is probably better linked to other wireless technologies and to a Global Positioning System (GPS) technology.

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The actual processing software is a blackbox to me. One hopes that content/knowledge entry is decentralized, automated when possible and web-based for location specific cast member updates.

The knowledge base seems relatively large, but its domain is confined to the 4 parks. Ideally Pal Mickey should operate throughout the Walt Disney World Resort and the more knowledge the better. Targeted current status information on line lengths at rides and starting time reminders for events can be especially helpful.

Currently there is not a demonstrated, well understood need for the Pal Mickey DSS. A well-designed system may however improve the guest experience when the park is crowded. Pal Mickey DSS needs to provide much more decision support if it is to be really useful. The marketing of the product is limited and it has a low profile in the parks, although there is a large banner for Pal Mickey and a store on Main Street in the Magic Kingdom. Most cast members had limited information about the system, but in one store a helpful cast member found me a brochure in a drawer behind the counter. The glossy brochure was well done, but I only received one in all of my store visits. As far as the technology and its reliability, the system is unreliable and obsolete and a new infrastructure will need to be built.

What can be done to improve the Pal Mickey DSS? It should probably only be available to guests at WDW resorts. Some exclusivity would probably positively alter perceptions of the system. Also, the system needs more knowledge about the "guest" user so that it can be a more personal guide. Also, the data from other guest information systems should be used by the Pal Mickey DSS. Pal Mickey needs to work throughout the WDW resort. Adding an ear bud might help users hear Pal Mickey. Making Pal Mickey more of a talking toy is not the answer for salvaging this DSS. Such an approach may sell more units in the short-run, but it won't save the system. Building large scale, customer facing DSS is a new adventure in systems design, product marketing and system maintenance for all of us interested in DSS. The challenge is exciting and the potential seems tremendous.

### *References*

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*The above is based on Power, D., What is the status of Pal Mickey? DSS News, Vol. 5, No. 16, August 1, 2004.*

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