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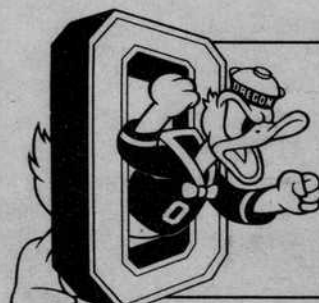
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# Odyssey en route to Mars

By Marcia Dunn  
The Associated Press

CAPE CANAVERAL, Fla. — The Mars Odyssey spacecraft rocketed away Saturday on a 286 million-mile journey to the Red Planet and what NASA hopes will be a mission of redemption.

It is the space agency's first launch to Mars since a pair of humiliating failures in 1999.

"Absolutely fantastic," said Ed Weiler, head of NASA's space science office.

NASA program scientist Jim Garvin, noted that every rocket launch is accompanied by exhilaration, as well as trepidation.

"But for Mars and the fact this is such a vital step for us to keep the progress going, our sense of electricity is heightened," he said. "There's literally electricity in the air."

Some 100 people gathered at the press viewing area at Cape Canaveral Air Force Station, a larger crowd than usual for an unmanned launch. Everything went well as the Delta rocket lifted off at the appointed moment at 11:02 a.m., carrying Mars Odyssey toward its destiny. The weather was perfect, with a stunningly clear aqua sky.

An on-board camera showed the launch site, then the cape, then the Florida coast growing smaller as the rocket climbed higher. Another camera panned on the golden-colored Mars Odyssey at the top of the booster, coasting 100 miles above Earth and eventually spinning away.

An exuberant Garvin oohed and aahed as he watched the flight on a video monitor.

A half-hour after liftoff, right on cue, Mars Odyssey was propelled out of Earth orbit at more than 25,000 mph and sped toward an October rendezvous with Mars.

"Mars Odyssey: Have a safe jour-

ney to Mars," the launch commentator said as flight controllers applauded and shook hands.

Named after Arthur C. Clarke's science fiction novel and movie, "2001: A Space Odyssey," Mars Odyssey is quite possibly the most scrutinized spacecraft ever sent to the Red Planet. Its primary mission is to search for water at or just beneath the Martian surface, from a 250-mile-high orbit.

"This mission has to succeed, there's no question," Weiler said Friday. "We've done the kind of testing, we've done the kind of checking that we know how to do ... and beyond that, I really don't know what else we could do."

**“You never stop worrying about it. It's like having a kid — you never quite crack the champagne.”**

**Phil Christensen**  
geologist,  
Arizona State University

Mars Odyssey is scheduled to reach Mars on Oct. 24 and slip into orbit around the planet. For 2 1/2 years, it will study minerals in the rocks and measure chemical elements like hydrogen in a quest for water.

"NASA's main goal here is looking for life. And so life means looking for water," said Arizona State University geologist Phil Christensen.

Perhaps just as important for NASA is showing the public that the Mars program is viable.

"There are a lot of people on the team who worked on the failed 1999 missions," said George Pace, Odyssey's project manager for the Jet Propulsion Laboratory in Pasadena, Calif. "They want some kind of redemption. They want a

chance to show they can make this right."

In September 1999, the Mars Climate Orbiter ended up in pieces around Mars or smashed on the planet because engineers mixed up English and metric units of measurement. Just 10 weeks later, the Mars Polar Lander crash-landed on Mars and was lost, most likely because of a premature engine shutdown.

To avoid another fiasco, NASA spent millions of extra dollars on Odyssey, boosting the total mission cost to \$297 million, and added dozens of extra sets of eyes to the project. About 22,000 parameters in the computer software, any of which could doom the mission if wrong, were double-checked.

The fact remains, though, that Mars is tricky to reach. NASA's success rate at Mars is about 60 percent. Counting Russia's failed efforts, the overall success rate is less than 30 percent.

"We certainly learned a few years ago how difficult it can be and how you don't want to take anything for granted, that this can be a one-strike-and-you're-out kind of business," said Scott Hubbard, NASA's Mars program director.

Besides its own scientific value, Odyssey's reconnaissance mission will help NASA choose the touchdown sites for a pair of rovers to be launched in 2003 and follow-on landers.

Christensen hopes to find hot springs on Mars, which would make ideal landing sites. An infrared camera will search for any hot spots on the dark, cold side of the planet.

Until then, Christensen is keeping his fingers crossed.

"You never stop worrying about it. It's like having a kid," he said. "You never quite crack the champagne."

# Online security focus of conference

By Brian Bergstein  
The Associated Press

SAN FRANCISCO — Ten years ago, when most people still thought of computer hackers only as the nerdy henchmen to villains in science fiction movies, a group of less than 100 cryptographers got together in a Silicon Valley hotel to share ideas.

Now the Internet is a pervasive part of life, a platform where \$657 billion worth of commerce was transacted last year, according to Forrester Research. With that figure expected to increase 10 times by 2004, online security has become a mainstream concern.

And that small cryptographers' gathering has exploded into a trade show and conference that is bringing more than 10,000 people to a San Francisco convention center this week. They will peruse exhibits by 250 security companies, chatter at a "cryptographers' gala" and gather for a closing ceremony featuring comedian Dana Carvey.

Lecture topics range from the arcane — one is titled "On the Strength of Simply Iterated Feistel Ciphers with Whitening Keys" — to the straightforward, like "Authenticity in e-Business."

The RSA Conference, named for the Bedford, Mass.-based security company that puts it together, began Sunday and runs through Thursday. In another sign that security has become important business, the sponsors include Intel, Microsoft,

Hewlett-Packard, IBM and Compaq. "I think the RSA thing has come of age, and people are taking the whole topic seriously," said Michael Ruehle, president and CEO of BioID America Inc., who plans to show off new technology from his company that scans a user's face, voice and lip movements for high-security identification.

**“The anonymity and ubiquity of the Internet that makes it so attractive to users and the marketplace are the same qualities that make it difficult to secure.”**

**Mike Houlahan**  
vice-president,  
Arcot Systems Inc.

Such biometric devices, which grant or deny access to users based on ironclad personal characteristics, have been available for years. But even though ordinary passwords are easily stolen or forgotten, biometrics have yet to move into widespread use because of high cost and varying reliability.

Now, they could get a boost from the federal electronic signatures law that took effect last year. The measure grants legal legitimacy to documents approved

or digitally "signed" online. That is expected to drive up demand for anything used to initiate a digital signature — such as fingerprint readers and other biometric devices, or "smart cards" in which identification information is embedded.

Security experts expect biometrics soon will be commonly built into cell phones, handheld computers and anything else connecting to computer networks. Ruehle hopes to strike up partnerships this week to speed that process along.

The most immediate challenge for Internet security and cryptography is online fraud; which by some estimates takes place eight to 12 times as much as it does in the real world.

"The anonymity and ubiquity of the Internet that make it so attractive to users and the marketplace are the same qualities that make it difficult to secure," said Mike Houlahan, a vice president of Arcot Systems Inc., a Silicon Valley company that makes software designed to limit access to computer files and networks.

Marina Donovan, an RSA Security Inc. vice president who is managing the conference, expects a lot of discussion on developing an industry standard for securing transactions over wireless devices.

"That impacts everybody, even my mother," she said. "Security is a mainstream issue. People need to know how to do business online with confidence."