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One giant leap for identity: Designing NASA's mission patches

by Andrew Zolli

Since Gemini 5 in 1965, mission patches have captured the spirit of each NASA manned space flight. With modest professional assistance, they are designed by the astronauts themselves. In a fascinating case study, Andrew Zolli reveals the iconography, teamwork, history, rituals, and meaning embodied in these unique visual symbols. He also distills four broader design lessons from this NASA communications program.



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By any measure, Scott Parazynski is the embodiment of that hallowed NASA virtue, “the right stuff.” In addition to traveling into space on no less than four space shuttle missions, the astronaut is a celebrated scientist, adventurer, and doctor. An honors graduate of Stanford Medical School, Dr. Parazynski has logged more than 2,000 hours flying a variety of aircraft, and has reached the summits of 48 of Colorado’s tallest peaks. He has spent more than 1,000 hours in space, including 20 hours’ worth of space walks, and traveled more than 17 million miles.

And, thanks to his NASA training, Dr. Parazynski is also, in a small but important way, a designer. That’s because one of the first things he and

his fellow astronauts do each time they are assigned a mission is to collaboratively design a “mission patch.”

Working closely with an internal graphic design facilitator for a period of months, the astronauts create a visual symbol that embodies the spirit, purpose, and vision of their mission.

Unique mission patches have been part of every manned space flight since the 1965 Gemini 5 mission, and they form a visual history of human beings’ first steps away from planet Earth.

Designing the patch is not merely a “feel-good” exercise for the astronauts—it’s a vital part of creating each mission’s focus and sense of team identity. Each patch also plays an important role in internal NASA culture and

builds the historical record. The patch's design process is taken extremely seriously. "There's a saying in the astronaut corps," says Parazynski. "You're not ready to fly until you've designed a patch."

Every patch's design is a mix of public and private iconography—some of it deriving from the specifics of the mission, some from the astronauts' private lives, and some from the shared experiences and heritage of the astronaut corps and the larger themes of science and space exploration. The patches are usually designed in bright, primary colors (golds, reds, yellows, blues, and greens are common) that echo NASA's own roots within the military. There is a straightforward style to the visual design of the patches that bespeaks the magnitude of the tasks the astronauts undertake. At this extreme end of

the human experience, there is little need for irony or unnecessary adornment.

There are also common visual themes that recur. For example, in the years following 1986's loss of the Challenger, many of the subse-

quent patches contained seven stars, one for each of the crew members. (There will likely be similar iconic echoes from the Columbia disaster, when space-shuttle flights begin again.)

Reviewing the patches in historical order reveals trends in space exploration that often go overlooked. The patches reflect the gradual shift from the single-astronaut missions of the early 1960s to today's teams of (typically) seven astronauts working more-complex missions. It's also possible to discern the shift from purely American space missions to the international collaboration that defines work on today's International Space Station—since those nations' colors and iconography inevitably become part of the mission patches. In this way, the patches have become a kind of institutional memory for NASA, visually recording its growth, milestones, and rare, if tragic, setbacks.

Designing the patches builds teamwork and communications skills among the most important members of each mission—the astro-

nauts—but the patches play just as vital a role in the larger NASA culture. For each person who travels into space, there are literally thousands of people on the ground, who contribute directly to each mission. After every space flight, there is a special "hanging ceremony" in which the patch is placed at the Johnson Space Center by an earthbound specialist who contributed in a large way to that particular space flight. Being chosen to hang the patch is an exceptional honor that carries real prestige within NASA—it's one of the core rituals of the organization.

And the life of the patches does not stop there. Mission directors and other senior staff who direct missions also earn the right to place plaques of the patches outside their offices—signifying their status inside the organization, regardless of their place on the organizational chart. "If you want to know who has the real prestige within NASA, just look for the offices with the most patches," says one senior staffer at Johnson Space Center. "In a culture that values achievement, these things have become our internal trophies and our currency."

Finally, the patches also form a profound link with the public, which treats the patches as tangible symbols of real space exploration. "A generation of baby boomers grew up with the excitement of the space race and the Apollo missions, and now they can participate symbolically by purchasing the patches," says Sean Collins, one of the graphic designers who work directly with the astronauts to design them. "Most people won't make it into space in their lifetimes, but this creates a direct bond with the ones who do."

Of course, not every organization does things as dramatic as sending people into space. But from the story of the NASA mission patches, at least four lasting lessons emerge that are applicable to every organization:

Memorialize through design. NASA is involving graphic designers in every major milestone in the organization and is "designing" its history and public image at each step. "Every mission is an opportunity to reinforce—and update—our identity through design," says Sean Collins. "What's produced is a record that is far more powerful than any corporate-identity style guideline."

Speak with an authentic voice. The patches are perfect expressions of a culture that values

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science and achievement above visual gloss. The simplicity of the patches, with their mix of obscure private meanings and literal symbols of space exploration, convey the unique character of the astronaut mission teams—to themselves and to the larger organization. “If these were prettier, more abstract, or more ornamental, they wouldn’t be NASA,” says Collins. “The patches are utterly who we are.”

Bridge design and operations. The patches work because NASA pairs graphic designers and astronaut mission teams right from the beginning of the process. The patches would be impossible to create without the involvement—and mutual respect—of both parties. “We’re not just providing a service to the astronaut crews,” says Sean Collins, “we’re teaching them the power and possibilities of design.”

Reinforce through ritual. The patch-hanging ceremonies that occur after every flight aren’t meaningless management palaver—they’re genuine private rituals that connect the whole organization with the greater mission and purpose of NASA. They help people at every level connect with its accomplishments, and they invest the symbols with lasting personal meanings. ^m

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Figure 1. Examples of space shuttle mission patches from missions 76 and 109 illustrate the complex and beautiful layering of public and private symbols. The patch for STS 76, left, included contributions from Astronaut Rich Clifford’s 9-year-old son.



Figure 2. NASA graphic designer Sean Collins and some of the many NASA mission patches that adorn the Johnson Space Center.



Figure 3. Patches—which are flown on board the Shuttle—are presented to NASA staffers who make exceptional contributions. Here NASA staffer David Russell is presented with a flown crew patch and montage from Astronaut Rex Walheim.



