QUEST

THE HISTORY OF SPACEFLIGHT QUARTERLY

Celebrating the Silver Anniversary of *Quest: The History of Spaceflight Quarterly*

1992 - 2017

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Celebrating the Silver Anniversary of *Quest: The History of Spaceflight Quarterly*

Since 1992, *Quest: The History of Spaceflight* has collected, documented, and captured the history of the space. An award-winning publication that is the oldest peer reviewed journal dedicated exclusively to this topic, *Quest* fills a vital need—*which is why so many people have volunteered over the years.*

Astronaut Michael Collins once described Quest, its amazing how you are able to provide such detailed content while making it very readable.

Written by professional historians, enthusiasts, students, and people who've worked in the field *Quest* features the people, programs, politics that made the journey into space possible—human spaceflight, robotic exploration, military programs, international activities, and commercial ventures.

What follows is a history of *Quest*, written by the editors and publishers who over the past 25 years have worked with professional historians, enthusiasts, students, and people who worked in the field to capture a wealth of stories and information related to human spaceflight, robotic exploration, military programs, international activities, and commercial ventures.

Glen Swanson	Founder, Editor, Volume 1-6
Stephen Johnson	Editor, Volume 7-12
David Arnold	Editor, Volume 13-22
Christopher Gainor	Editor, Volume 23-25+
Scott Sacknoff	Publisher, Volume 7-25+

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From *Countdown* to *Liftoff*—The History of *Quest*
Part I—Beginnings through the University of North Dakota Acquisition 1988-1998

By Glen E. Swanson

Shortly after Chris Gainor became the editor of *Quest: The History of Spaceflight Quarterly*, he and publisher Scott Sacknoff approached me about contributing the first of what is hoped to be a multi-part series chronicling the history of the publication. Now that the magazine has achieved the remarkable goal of 25 years of continuous publication, it seems appropriate to reflect back upon how it all got started, where it has gone, and how it has been able to continue. From the publishers, editors, and writers responsible for the production of each issue to the dedicated group of readers who continue to subscribe, all share a common interest in outer space and in chronicling humanity's efforts to explore it.

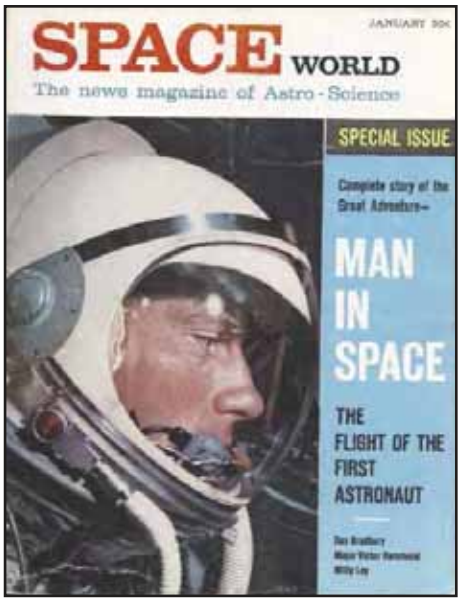
Celebrating its silver anniversary, *Quest* remains one of the few printed publications in its field that has endured and that itself is worth a closer study. I hope that this series will serve as a launching point for an in-depth, critical examination of the history of subscription-based publications devoted to the exploration of space that have come and gone over the years.

Back in 2008, I read an online article in *The Space Review* by frequent contributor Dwayne Day titled "A quick guide to space news publications in print" (see *The Space Review*, 5 May 2008). Day's article offered an overview of space-related publications then in print. Though not all-inclusive, the article was fairly extensive, giving brief opinionated overviews of many publications in print at that time. The article resulted in a smattering of reader postings from followers of the forum including a piece about a now out-of-print publication called *Space World* (see *The Space Review*, 19 May 2008).

As a kid growing up during the peak of the Apollo program, *Space World* was the publication to seek out in the library. I don't recall that I ever saw it on newsstands, and eventually I subscribed to it. It appeared at the same time as *Sky & Telescope* and *Astronomy*, but these publications did not focus on space travel. *Space World*, as its very name proclaimed, did, in an easy-to-understand way through articles that made liberal use of photos and illustrations. Indeed many issues were simply reprints of press materials issued by NASA and other aerospace companies, with the editor not even bothering to change the font to match the other articles.

Space World began in 1960 by science fiction and comic book author Otto Binder. The very first issue hit the newsstands in May of that year under the name *Space World—The News Magazine of Astro-Science*. The publication served as a counterpoint to the numerous lore-based UFO and flying saucer-based pulp magazines that were common at the time.

In 1963, *Space World* was purchased by Ray Palmer, an interesting character who cut his teeth in the world of pulp fiction as editor of *Amazing Stories*. Ray Palmer, or as he liked to be called "Rap," announced his recent acquisition in one of his magazines *Flying Saucers*, "Now in *Space World*, you will be able to get the latest developments in space matters, while in *Flying Saucers* you will continue to get the world's only complete coverage of space mysteries."

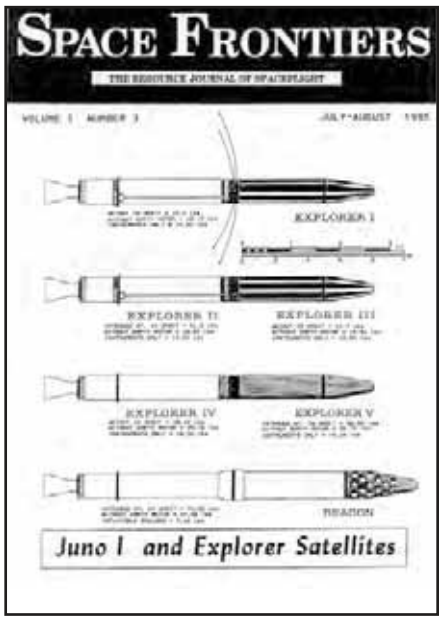


The first popular publication devoted to covering spaceflight in the United States Ray Palmer's *Space World* had a near 30-year publication run from 1960-1988.

(Source: Raymond Palmer, *Flying Saucers*, September 1962, 2.)

Palmer was an unusual fellow, and more should be written about him. Writer Fred Nadis took a stab at doing just that with his book *The Man from Mars—Ray Palmer's Amazing Pulp Journey* (Penguin, New York 2013). In Nadis' book he describes how the diminutive Palmer, born with a hunchback that forced him to stand at just a little over 4 feet tall, created numerous publications that many of my generation grew up with, including *Other Worlds*, *Universe*, *Fate*, *Mystic*, *Search*, *Flying Saucers*, *Hidden World*, and of course *Space World.*

Space World remained one of the longest running publications of its kind. It survived for over a quarter of a century, finally folding in December



Proving that a self-published space-history themed publication could be done, Ted Talay's excellent *Space Frontiers* ran from 1985-1989.

1988. Whatever its business model, it succeeded in spite of having a relatively low number of subscribers and a near non-existent advertising base—two essentials for the ongoing success of any publication.

After Palmer's death, his widow somehow managed to keep the magazine going. Perhaps this was due to the loyalty of its readers and the contributions of a then young Jim Oberg, who worked for Palmer starting as an associate editor for *Flying Saucers* and then, in 1976, due to Palmer's failing health, took over as editor of *Space World*.

Shortly after graduating from college, I was lucky enough to obtain employment during the summer of 1988 as a Space Camp counselor in Huntsville. I was stricken by Kate Capshaw's performance in the 1986 widescreen treatment of the franchise and knew that if I was going to be an astronaut (or not), Space Camp was where I needed to go. Young and foolish, I headed down to Huntsville in my 1978 Datsun four-door sedan.

It was while trying to keep a bunch of fourth graders from sneaking out of their dorm rooms that I got the long-distance phone call that brought me back to Michigan. During my years as an undergrad at Western Michigan University, I often volunteered with the Michigan Space Center in Jackson, helping with their annual Space Day and summer space camps. I made some good contacts and grew close to several of the staff there, including Fran Greene, the Space Center's program coordinator. Fran was a great inspiration as she was filled with enthusiasm and encouragement in everything that she did. She also was close to retirement.

The call that I received came from Jim Satterelli. Jim was the director of the Michigan Space Center and had called to see if I would be interested in coming back for an interview as Fran announced that she would be retiring. I was delighted at this news as it allowed me to return back home with the likely prospect of obtaining employment in the space education field while no longer having to tape kids into their rooms. (We used strips of masking tape across the kids' dorm room doors in the Huntsville Marriott to make sure cadets did not leave their rooms. A quick check for broken tape showed if they had escaped).

After heading back north and meeting with the folks at Jackson Community College, they offered me the job. In the fall of 1988 I became the new Program Coordinator of the Michigan Space Center.

One of the wonderful perks of working as an educator back in the late 1980s was that you could purchase Apple Computer products at a substantial "educator's discount." Not only that, but what you did buy you could purchase over time because they could deduct payments from your paycheck at no interest. This was great because one of the first things that I did as a new employee was purchase a Macintosh SE, complete with an external 20MB hard drive and ImageWriter printer—all for the princely sum $2,500, an amount that, adjusting for inflation, would amount to more than $5,000 today.

The relative ease with which fairly high-quality publications could be produced as a result of the mid 1980s introduction of the personal computer and desktop publishing caused a surge in niche publications. When the last issue of *Space World* came out in December 1988, a faithful companion of my youth had passed away. However, by this time other publications had come onto the scene. These included *Countdown*, a monthly publication that focused on the Space Shuttle program, and a slick new full color bimonthly magazine called *Final Frontier—The Magazine of Space Exploration*, which also hit the newsstands with Tony Reichhardt as editor. Tony would move on to become editor of the *Smithsonian Air & Space Magazine*, a position he still holds today.

Theodore A. Talay, an aerospace engineer with NASA's Langley Research Center, began producing from his home in Newport News, Virginia, a small desktop publication called *Space Frontiers—The Resource Journal of Spaceflight*. Premiering in 1985, each 20-page bimonthly issue contained photos and drawings depicting various rockets and spacecraft in articles "designed to educate the reader in rocketry and space basics." What caught my attention was his dominant history of spaceflight theme, something that no single publication had previously done. Sadly, medical problems forced him to close the publication during the fall of 1989 after producing only 23 issues.

While working at the Michigan Space Center, I often corresponded with Ted, explaining how I had been toying with the idea of putting together my own publication that would focus on the history of spaceflight. Called *CAPCOM—The Journal of the Michigan Space Center*, it would be a bimonthly publication with regular columns on international space exploration, state-funded research efforts in space, astronauts with state ties, and space history. It would also have an aerospace educator column devoted to teaching space in the classroom as well as describing resources, books, and publications dealing with space. The publication would be offered as a perk to encourage membership with the Michigan Space Center as well as be the forum for all events and organizations within the state that are active in space and space-related activities.

CAPCOM was never published, even though I managed to produce a 26-page galley proof complete with articles, drawings, line art, and photos. Initially, the premiere publication was to be released in 1989 in order to coincide with the twentieth anniversary of *Apollo 11*. Those familiar with *Quest* will find that most of the contents from that first and only issue of *CAPCOM* made its way into several issues of *Quest*. They included an article by Peter Alway on the V-2 rocket, complete with his amazing scale drawings that have since appeared in multiple editions of his international best selling reference, *Rockets of the World.*

After leaving the Michigan Space Center, I took the idea of *CAPCOM* with me. Returning to Grand Rapids, I sought to go into business for myself. I purchased a Chief 17 offset printing press and took to the idea of forming a publishing company to produce a space magazine. After all, I had my Mac, a printing press, an idea for a magazine, and the wonderful optimism of ignorant youth. All I needed now was a name for my company. Since "CAPCOM" was a NASA acronym for "Capsule Communicator" I used "CSPACE" which stood for the Center for Scholastic Programming in Aerospace Education. The name sounded cool as long as no one asked what it meant.

The Michigan Space Center in Jackson, Michigan. The birthplace of *Quest*.
Photo courtesy Glen Swanson

Even though I knew how to use a Mac, I did not know how to run a printing press. Fortunately, there was a class offered by our local district skills center called "Offset Printing and Graphics." I signed up, paid the course registration fee, and sat in for nine weeks with a bunch of high school students who were taking the class as part of their summer school. This was the best money I ever spent. From darkroom work, optical typesetting, and screening photos, to platemaking, printing, collating, folding, and stapling, this class taught me all I needed to know in order to print a magazine… *all that is, except how to fund it.*

Fortunately, my new skills allowed me to seek out work in the printing field to help offset the cost of producing a space magazine. In January 1992 I landed a part time job with Grand Rapids Sash & Door, an area wholesale distributor of doors and windows. They had their own in-house print shop and needed a printer to run their printing press.

One of the advantages of working at Sash & Door was that they had a complete darkroom that I could use to make camera-ready reductions and enlargements as well as screened halftones. Desktop publishing was great, but it had its limitations, and one still had to use a darkroom to produce good halftones for printing photos. The shop also had a hydraulic paper cutter and I remember hauling in many issues of *Quest* that I had printed, folded, collated, and stapled but needed to be trimmed before mailing out.

Starting a magazine from scratch was not easy. Subscribers helped provide material for each issue, but I did the production on all of those early issues from the printing to the mailing.

In early 1992, the first issue of my new space history magazine finally premiered but long-time sub-

scribers may recall that what they got in the mail was not called *Quest*. The very first issue was called *Liftoff*.

On 11 June 1992, I received a letter from the legal offices of McGraw-Hill, the well-known book publisher. They also happen to be the publisher of *Aviation Week & Space Technology.* The letter asked about my legal status relating to the name *Liftoff*. As explained in their initial letter, the Aviation Week Group of McGraw-Hill, Inc. had been developing plans for an educational magazine about aerospace, the name of which was to be *Liftoff*. In connection with this magazine, they had filed an intent-to-use application with the U.S. Patent & Trademark Office. To make a long story short, basically, they beat me by a matter of months to the legal paperwork that would have allowed my first-use claim to the name in a printed publication. My patent attorney told me that I could fight the claim but it would be expensive.

Now I found myself with a premiere issue of a new magazine that had been mailed to hundreds of prospective subscribers, only to have to change the name after the very first issue. I was worried. Would the idea of having a space history magazine fall apart because the name had to be changed? It was a rough start for the new magazine.

After a few sleepless nights and phone calls with friends, many of whom I made as a result of them subscribing after receiving the first issue of *Liftoff*, I decided that the idea of the magazine was stronger than its name and that the publication should go on. But what to call it? So began a quest to find a new name. This time I would do my homework and make sure that whatever name I chose, I would make sure to thoroughly secure its legal status.

The next "premiere" issue came out during the second quarter of 1992. *Quest—The History of Spaceflight Magazine* now made its mark on the world with Volume 1 No. 2. The legal claim to its name was now more certain, though it did have a few challenges during the multi-year effort to secure the formal trademark. This included overcoming challenges by Nissan motors regarding possible implied connection to their *Quest* minivan as well as responding to the owners of a reboot of the original 1960s *Jonny Quest* animated television series who wanted to produce a comic book tie-in called *Quest* to go along with their new TV series.

With a new name securely in place and a growing subscriber base, *Quest* began to establish itself during the first half of the 1990s. The magazine's daily operations proved to be a lot of work. During this time, the Internet was only beginning to become a usable entity, mostly limited to online chats and e-mail. The idea of downloadable attached files was something that still had not materialized, at least not in the form that we recognize today. Dialup access and low baud rates limited the amount of information that could be exchanged online. Plain paper faxes rather than thermal paper began to be used and proved wonders for their time, since they were far more efficient than the early Internet in sending pages of formatted text and images to distant locations.

To help promote the magazine, I traveled to various space events such as the Midwest Space Development

The Chief 17 offset printing press that produced the very first issues of *Quest*. Shown are my late father (left) and grandfather, both of whom were tremendous inspirations to me.

Photo courtesy Glen Swanson

Conferences and the National Space Society's annual International Space Development Conferences. These events offered opportunities to connect with others, network, and promote publications like mine. During one of these events in 1993, I had the opportunity to meet the editor and publisher of *Countdown*. Dixon P. Otto was the founder of Main Stage Publications in Athens, Ohio. A journalism graduate from Ohio University, he started producing a monthly publication ten years earlier that focused on the Space Shuttle program. Like *Quest*, his magazine was produced entirely by him out of his home using desktop publishing.

In talking with him, I found we had a lot in common. At the time we first met, however, he had been producing his magazine for 10 years whereas I had been at it for a little more than a year. We went to lunch at that conference, where he explained how the downtime imposed in the wake of the *Challenger* accident really made it difficult for him to keep the magazine going. I started subscribing to the magazine shortly before the Shuttle's return to flight. Even so, Dixon explained that subscription numbers had started declining, and I got a sense from his tone that he was worried.

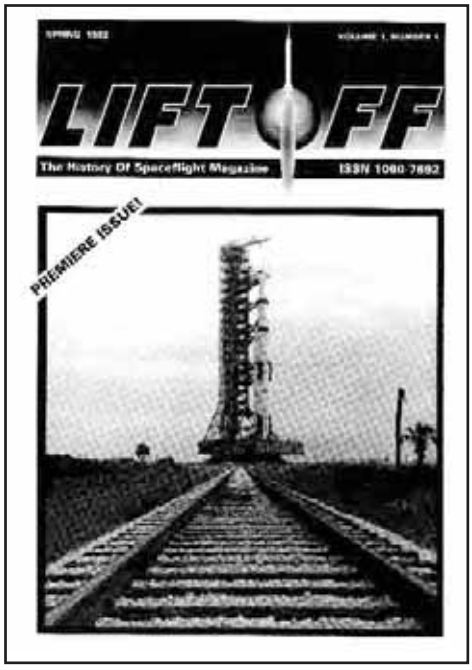
As a seasoned veteran of the self-publishing world, Dixon gave me some good sound advice, including making sure to pace myself to avoid getting burned out. He said that the world of self-publishing can be very interesting but also very lonely as most folks don't realize how much work goes into producing a regular subscription-based publication. The work removes you from a lot of other things in life.

As *Quest* matured, daily trips to the post office were the norm. This was before regular email and nearly all correspondence was done via "snail mail." Subscriptions came in, checks were deposited and complaints were dealt with. I remember one subscriber who was so upset about a particular issue that he sent a real lemon wedge. The folks at the post office flagged this for me and made a big deal of it when they brought the dripping envelope out to the front counter. I responded to the angry customer by terminating his subscription and refunding his money. Soon after, I received a phone call from him begging to reinstate his subscription. He was upset about an issue but not upset enough to cancel his beloved *Quest*.

In December of that same year Dixon Otto called me. He remembered our meeting from earlier that year and explained that he wanted to get out of the magazine business. He asked if I would be interested in assuming ownership and publication of *Countdown*. I told him I would think about it and get back with him after the first of the year.

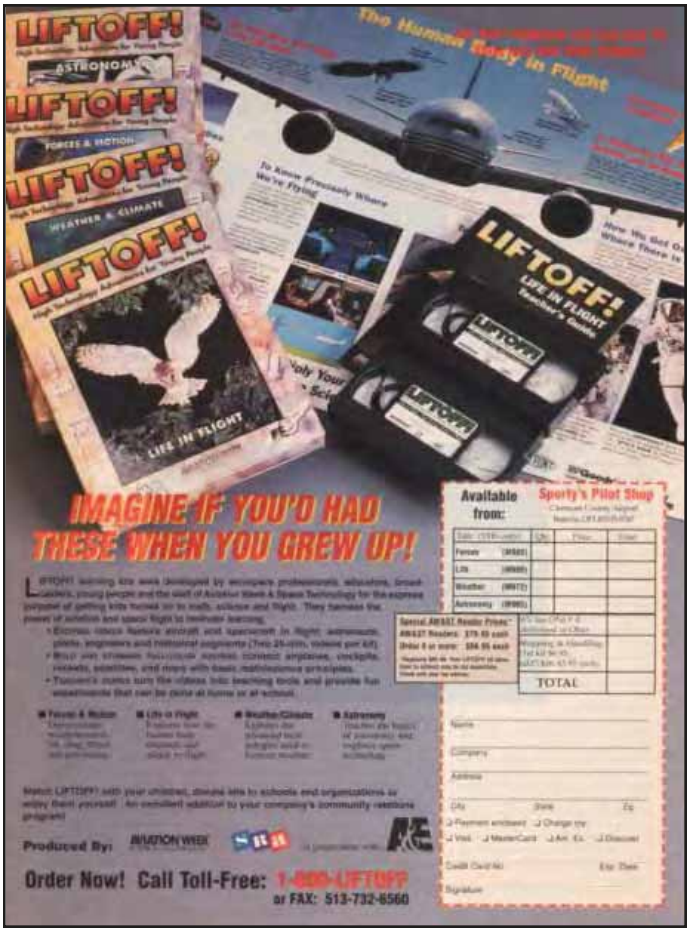
By the end of 1993, *Countdown* had a paid subscription base of nearly 3,000 whereas *Quest* had just under 900. After two years of production, I was beginning to get comfortable with the workload and was finding that *Quest*'s subscription base was growing. It was not making a profit, but at the same time it was not losing money either. Would taking on another publication with an existing subscriber base help or hurt *Quest*, *Countdown,* or both? I decided to find out and agreed to acquire *Countdown*.

In May of 1994, I drove down to Athens, Ohio, to meet with Dixon and sign all the paperwork that legally transferred ownership of *Countdown* to CSPACE Press. Shortly after this time, I left Grand Rapids Sash & Door. Managing and producing two magazines would now keep me busier than I had ever been before and would help make CSPACE a known entity.



In order for both magazines to succeed, I had to make changes. One of the more unpopular of these was reducing the frequency of *Countdown* from being a monthly to a bimonthly. I began seeing the writing on the wall as the Internet was becoming a very real presence that allowed nearly instant access to timely news and information. By this time, there was also more competition in print media as other publications entered the fold such as *Final Frontier* (1988), *Space News* (1989) and *STS Mission Profiles* (1992). These other publications were covering current space topics such as the Space Shuttle, but there still was no publication other than *Quest* covering space history.

In June 1994, Dixon P. Otto published his 132nd and last issue of *Countdown*. He spent 11 years doing the magazine and now the torch had been passed. Starting with the July/August 1994 issue, the new *Countdown* was now being published by CSPACE. To help offset the less frequent production run, each bimonthly issue now had more pages including more color photos. At this time, I did all of the management and layout but continued farming out the

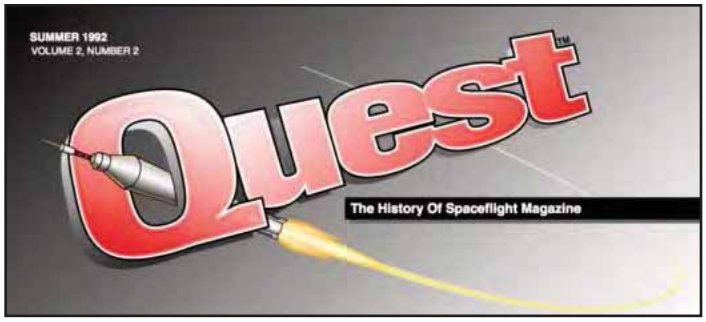


The source of much frustration. This is the McGraw-Hill product that forced me to change the name of my magazine from *Liftoff* to *Quest*.

printing, distribution, and mailing.

Quest continued in its regular quarterly format, but I could now print each issue with higher quality photos and graphics, something that I could not do before because of the limits of my own equipment. So much of space history is in photos, but not just any photos. Specifically, I sought out images to include in each issue that were rare and told a story that had not been told in recent memory. This took knowledge and experience because I had to be familiar with what was printed. I had to know the literature in the field.

By 1995 I was making regular trips down to the Kennedy Space Center to cover various Shuttle missions as part of NASA's badged press corps, meeting other journalists in the field who were worlds better than me. These included Jim Banke, Beth Dickey, Todd Halvorson, and Bill Harwood. I also rubbed shoulders with several long-time veterans including Jay Barbree and the late Howard Benedict. I even had the good fortune of meeting the legendary Martin Caidin not too long before he passed away.



Same publication but with a different name. Here is the logo for *Quest,* which I tried printing in color for the second issue during the summer of 1992.

That summer, the first Shuttle/Mir docking mission occurred and the film *Apollo 13* premiered. There was a heightened awareness of space exploration, both past and present, and my magazines were there to help capture it.

But storm clouds loomed on the horizon. The number of *Countdown* subscribers continued to fall while the number of *Quest* subscribers continued to rise. I was also starting to feel the pressure of managing two magazines and producing 10 issues a year with each issue averaging 50 pages in length.

I decided that of the two magazines, *Quest* had the best chance of surviving. *Countdown* was feeling the rising competition of other news sources as well as the rapidly maturing presence of the Internet. No one was doing anything like *Quest*, while there were other print and online sources people could go to for the same information that was being offered in *Countdown*.

The November/December 1995 issue was the last issue of *Countdown*. Starting with the first quarter in 1996, *Quest* replaced *Countdown* and became known as *Quest: The Magazine of Spaceflight.* Both the contents of *Countdown* and *Quest* were combined into one single quarterly publication offering the best of both worlds. As my promotional literature described: "The past, present and future of space exploration is now covered through the pages of one magazine…*Quest*."

At the same time that the new format *Quest* was launched, I enrolled in a distance learning degree program. The University of North Dakota in Grand Forks had an established Master's Program in Space Studies that proved to be popular among career Air Force officers stationed at nearby Minot Air Force Base. Beginning in January 1996, they offered the same program in a newly revamped online distance-learning format. Other friends and subscribers told me about the program and encouraged me to enroll. I did, and soon joined 40 others from around the globe who made up the class.

At this time, the subscription base for *Quest* began to stabilize at around 2,000 paid subscribers. With the elimination of *Countdown*, funds for the magazine started to fall as subscriptions slowed. This was due, in part, to disgruntled subscribers who chose not to renew, as well as potential new readers who may have been reluctant to subscribe because they were skeptical of the evolving *Quest* format.

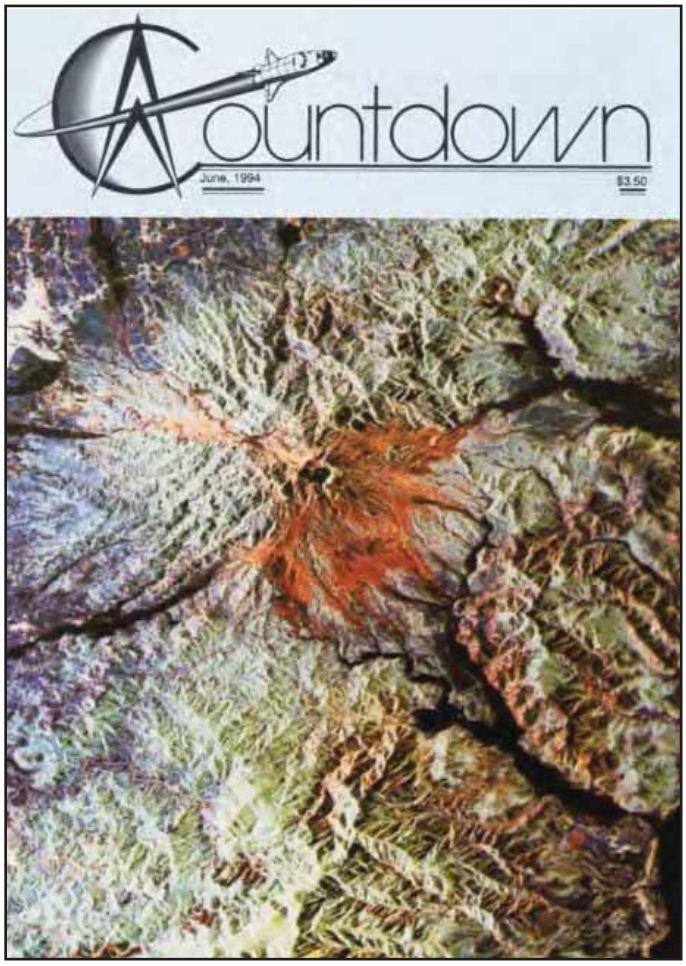
During the summer of 1996 I got a call from a local aerospace contractor. Earlier that year, I had applied for a job as a proposal coordinator/technical writer with Smiths Industries Aerospace, and now they wanted to see me. Soon after the interview, they offered me the job. For now, my funding problems for *Quest* had been reduced but not eliminated.

By August 1996, I settled in with my new job at Smiths and continued to work on *Quest* as well as my distance learning UND Master's Program. But simultaneously working at a full-time job, producing the magazine, and working on my master's degree began taking its toll. I was getting tired. In addition, subscriptions were falling yet production costs, especially shipping, continued to rise. Like many other news media began doing at this time, I considered switching the publication to an online format. I even drafted an announcement that I considered mailing out to current readers explaining that *Quest* would switch to being a free online format magazine. In any event, I decided that the Volume 5 #4 1997 issue would be the last regular printed edition of *Quest* that I would publish.

It was during this time that I learned of an online space forum called Friends and Partners in Space (FPSPACE). Founded in 1994 by Jennifer Green, FPSPACE was an international nonprofit organization devoted to improving communication and cooperation between the West and the former Soviet Union in areas related to space. They were organizing a 10-day trip to Russia in April 1997. Many *Quest* subscribers were going as well as several faculty members from the UND Space Studies program.

For the first time in my life, I traveled overseas. From 4-14 April 1997 we had an amazing experience as participants were immersed in Russian space policy and culture. We toured the Russian Space Agency, the Cosmonaut Training Center in Star City, the Orevo Educational Center and Museum, the Khrunichev (Proton) Factory, the Moscow Aviation Institute, TsUP Mission Control, and the Tsiokovsky Memorial Museum in Kaluga.

During the FPSACE Russia tour, I met two UND faculty members, Joanne Gabrynowicz and her husband John Graham. Both were familiar with *Quest* and were impressed with the publication. During one of our conversations during the Russian tour they suggested some changes for the magazine. They also alerted me to several funding sources



including the NASA Space Grant Program that might be able to offset production costs.

Based upon initial conversations that I had with the two UND faculty during the FPSACE tour of Russia, I decided to formally approach UND to see if they would be interested in continuing the publication of *Quest*. After our return from Russia, I started exchanging e-mails with the Space Studies Department that summer, and these eventually led to them acquiring the publication.

A lot of paperwork was exchanged including a visit to UND's campus during the first quarter of 1998, but eventually, a deal was signed. On 5 February 1998 I mailed out a special free issue of *Quest* to all subscribers giving them details about the new UND/*Quest* ownership. By June of that year, the first issue of *Quest—The History of Spaceflight Quarterly* (Vol. 6 No. 1) was published. UND's Stephen Johnson became the new editor, and I remained onboard for a brief period serving as a department editor as well as consultant to help ensure a smooth transition.

Shortly after the first issue of UND's *Quest* came out and upon obtaining my new master's degree in Space Studies, I moved down to Houston to begin a new job with NASA's Johnson Space Center as a historian, a position I

Here I am showing off one of the custom-built display cases for Peter Alway's famous "Rockets of the Word" color poster. This poster proved to be the biggest seller of anything that we ever offered in the magazine. It was an amazing success.

Photo courtesy Glen Swanson

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held for nearly four years. During that time, I distanced myself from *Quest*, feeling confident that it was in capable hands.

In reflecting back over the nearly 10 years of being involved with the magazine from initial conception in 1988 to UND's production of the "new" *Quest* in 1998, I have been very pleased with how everything has turned out. During that inaugural period of the early 1990s, each issue was by no means a solitary effort. There were many who contributed articles, photos, and artwork that went into each issue. Some started out as subscribers who eventually became regular contributors. These include Joel Powell, Peter Alway, Dan Gauthier, Keith Scala, Dennis Newkirk, Ed Hengeveld, Ron White, Don Pealer, Dwayne Day, and Asif Siddiqi—all whom helped make those early issues of *Quest* possible. Sadly, both Dan and Dennis have passed away, but Keith and Joel are still involved with the magazine, serving as assistant editors. Asif went on to become a highly respected spaceflight historian in his own right specializing in the history of the former Soviet space program. He wrote the award-winning book *Challenge to Apollo: The Soviet Union and the Space Race, 1945-1974*, regarded as the best English-language history of the Soviet space program in print and noted by the *Wall Street Journal* as "one of the five best books" on space exploration. He is now a full professor at Fordham University and continues to serve *Quest* as one its Editorial Board members.

Looking at the number of space-related publications that have come and gone before and since *Quest* first premiered in 1992, the fact that it has survived for more than a quarter of a century is nothing short of amazing.

I recently spoke with *Space Frontiers* founder Ted Talay, now retired, from his home in Newport News, Virginia. I thanked him once again for the work that he did and the inspiration that he had given me through his nearly four-year production run of *Space Frontiers*, a run that ended several years before *Quest* first premiered. Together we reminisced about those days of self-publishing.

"I started falling behind in publication schedule after the first year" explained Ted. "I always thought that I would make it up." When asked if he ever turned a profit, Ted replied "Well, yes and no. As a tax break I guess I did, although from a simple money in, money out viewpoint it was more break even. Printing and production costs kept going up along with postage." Ted went on to explain how it was the subscribers' support for the publication that kept him going during the lean and frustrating times. "Subscriber response was almost universally favorable—I still have subscribers writing and asking me if I would start publishing again."

I had many of those experiences myself while doing *Quest*. If someone approached me today about doing something like I did, I would suggest they start out smaller. You also need to be honest with yourself. When it stops being fun, assess what you're doing and correct it. If after then it still is no fun, it might be time to pull out.

In Dwayne Day's original 2008 *Space Review* article, "A Quick Guide to Space News Publications in Print," he offered several closing remarks about the long-term viability of these printed publications, accurately predicting that many of them would fold. He felt that *Launch* would "last the shortest" (it folded shortly after its premiere in 2006) and that *Space News* would "go to an online subscription format" (it did) although it still continues distributing a printed version, albeit greatly reduced in content from its original biweekly newspaper form.

In spite of a strong digital presence, magazines are here to stay. Publishers have not yet entirely written off newsprint. Just look at the periodical section of your local bookstore. Some, like *Quest*, have succeeded in finding a niche market; you would be hard-pressed to find any similar content on the Web. Robert Pearlman's *CollectSpace* website which was launched in 1999, offers a regular forum for space collectors and perhaps comes the closest to what an online version for *Quest* might have been if it had gone that route back then. But *Quest* is and continues to remain a niche or specialty publication and that is the reason, at least in part, for why it has continued.

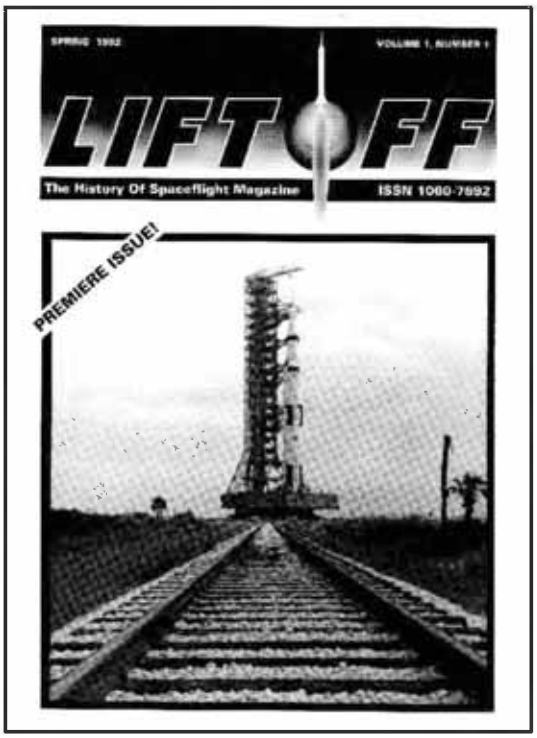
Because *Quest* does not deal with the present but focuses on the past, it does not have to compete with current headlines. It can produce historical articles that can be savored and not rushed.

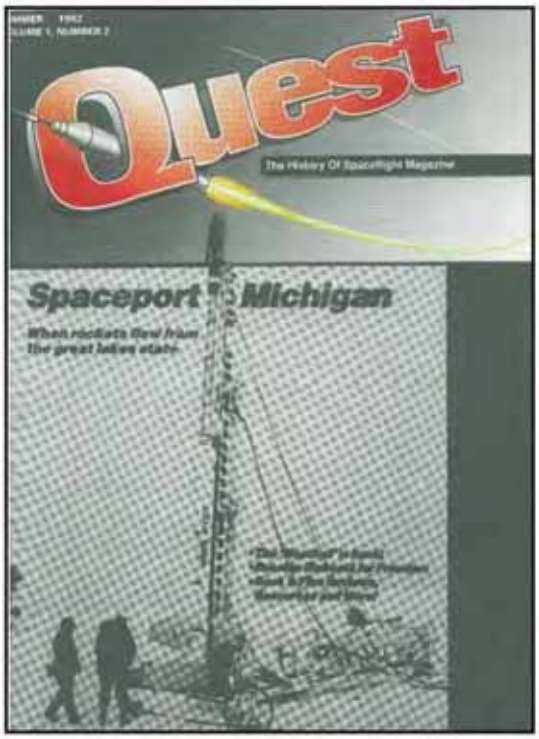
Though accurate in most of his predications, Day originally thought in 2008 that *Quest* would "fold in a few years, because it seems to lack the kind of support from the space history community that it requires in order to stay vibrant." Nearly 10 years later I'm proud to say that because it does have the right kind of support from the space history community, *Quest* remains in print, and I am optimistic that it will continue to do so for a long, long time.

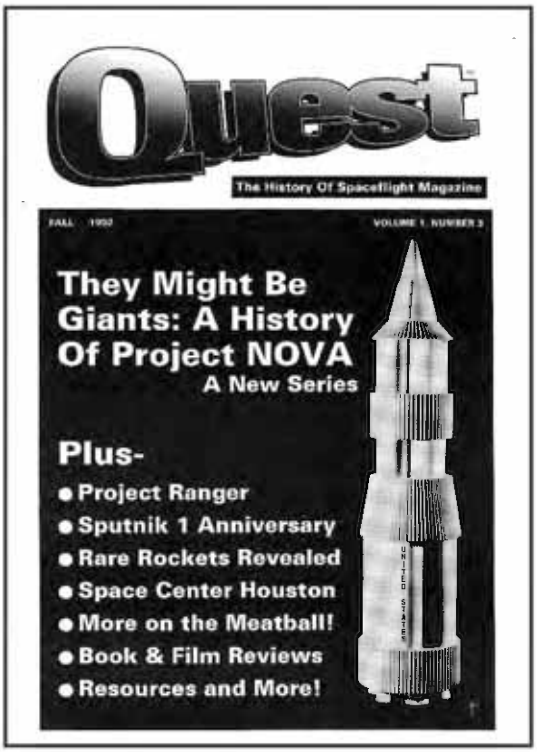
Happy silver anniversary, *Quest*. It is good to have played a role in your success.

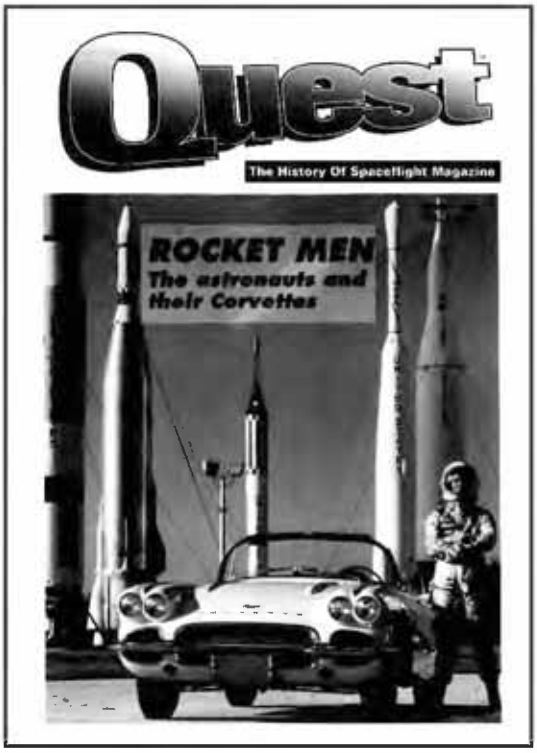
About the Author

Glen Swanson is currently researching mid-to late-19th century renewable energy efforts with a specific focus on early wind power generation. He lives in Grand Rapids, Michigan with his wife and their 9-year old son.





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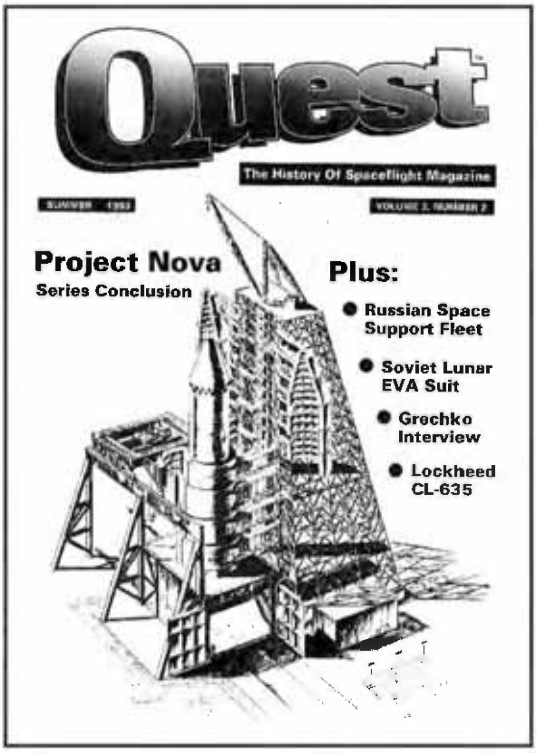
The History Of Spaceflight Magazine
ROCKET MEN
The astronauts and their Corvettes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Plus:
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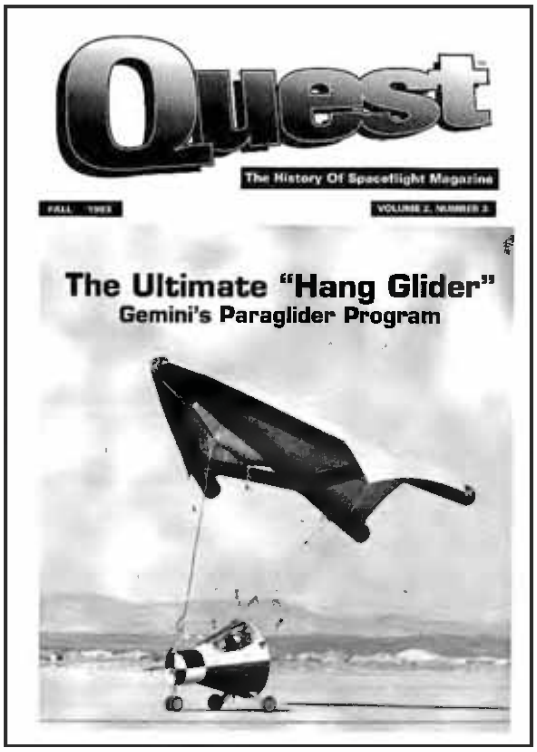
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The Ultimate "Hang Glider"
Gemini's Paraglider Program

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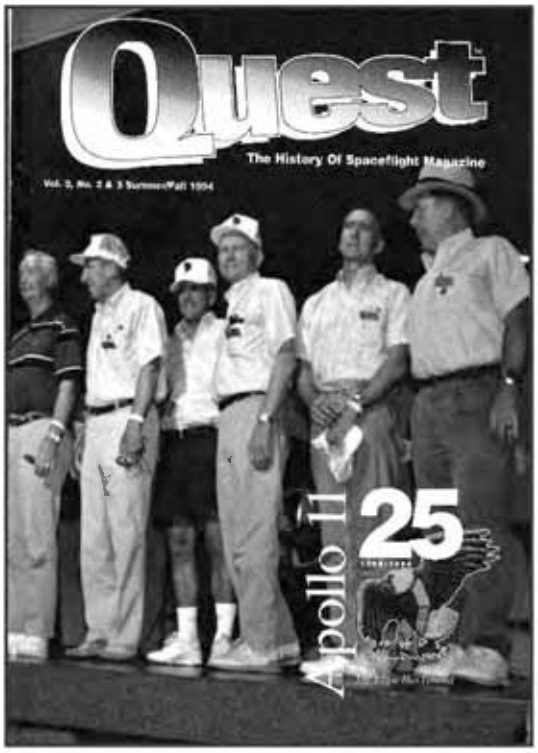
NASA


Quest
The History Of Spaceflight Magazine
Apollo 11
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Vol. 3 No. 4 Winter 1994
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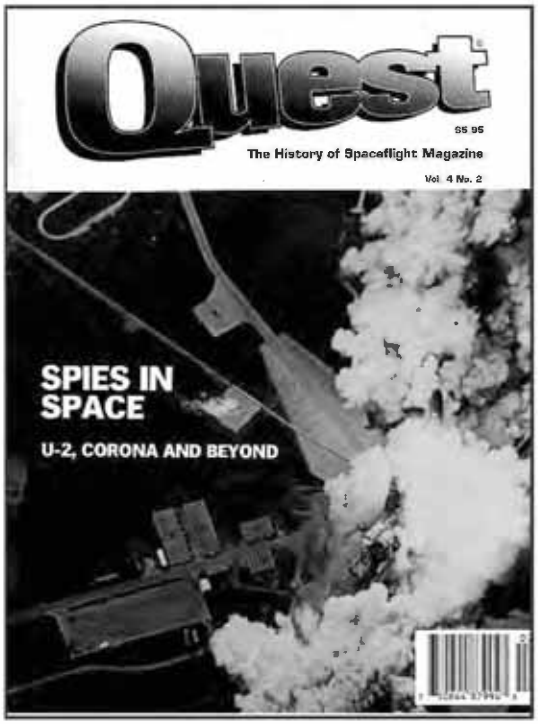
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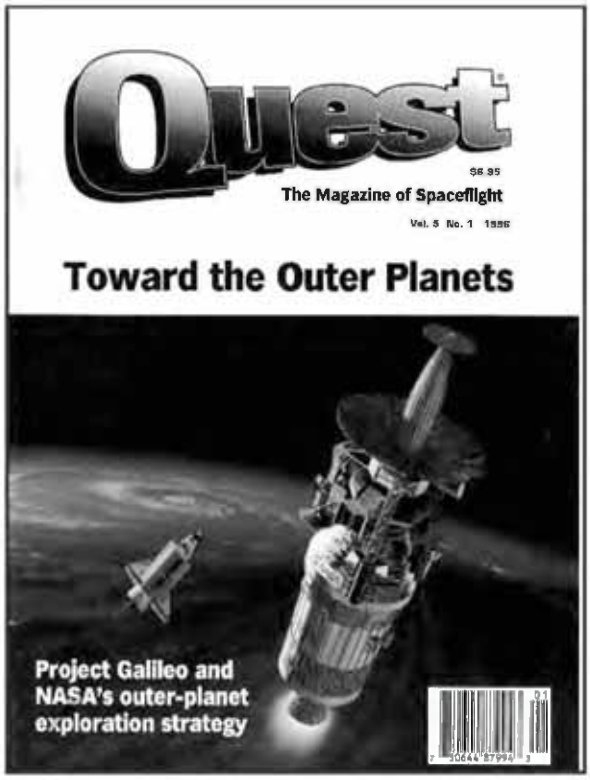
The Origins of Modern Rocketry
PLUS
• A veteran reporter's unique perspective on covering the space age.
• A look at where moon rocks are kept and what they have told us about the lunar surface.
• An illustrated chronology of early rocket experiments.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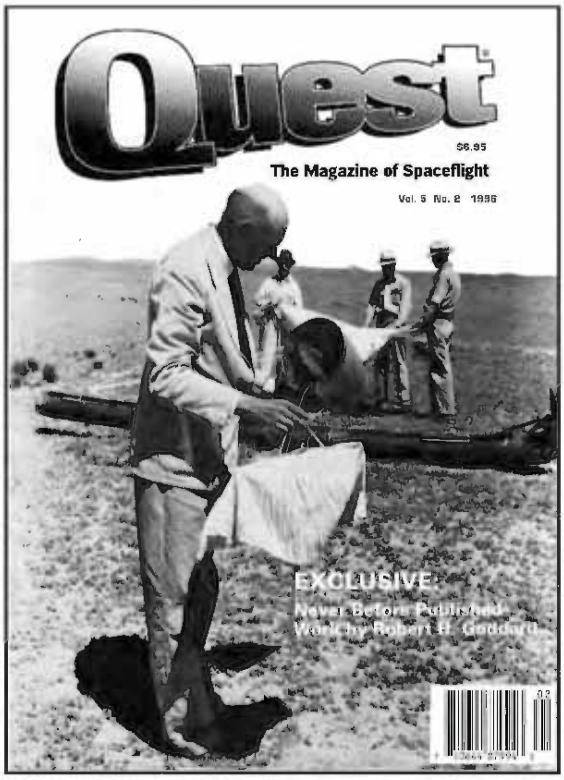
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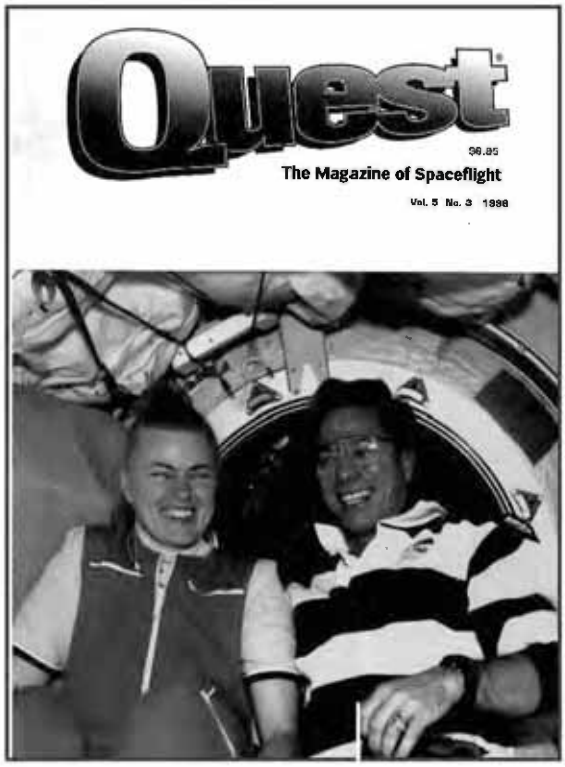
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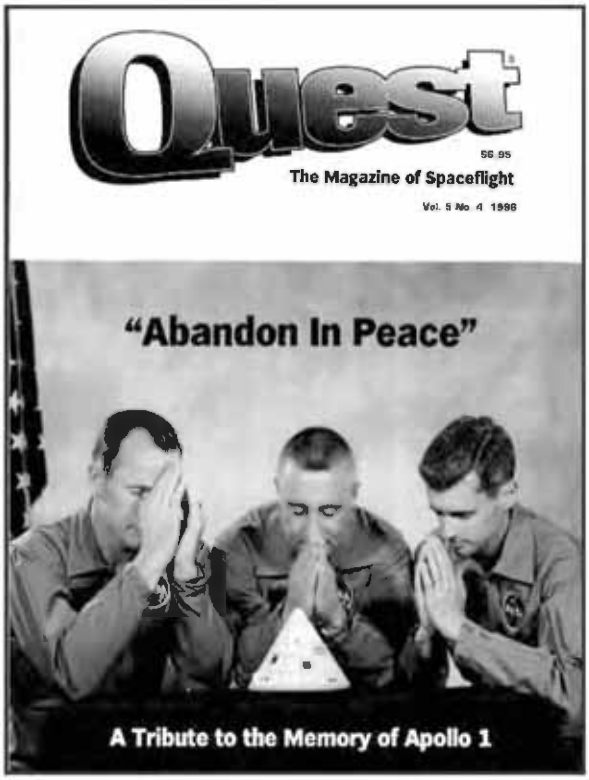
Quest
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The Magazine of Spaceflight
Vol. 5 No. 4 1996
"Abandon In Peace"
A Tribute to the Memory of Apollo 1

FROM MAGAZINE TO JOURNAL: THE HISTORY OF *QUEST* PART II —THE UNIVERSITY OF NORTH DAKOTA YEARS, 1997-2005

By Stephen B. Johnson

In August 1998, *Quest* subscribers received their first issue since late 1996. In several ways, this was the same publication from a year-and-a-half before. But in many others, it was very different. Some changes were physical and obvious. The front and back covers of Volume 6, Number 1, for "Spring 1998" were color instead of black and white as they had been for Volume 5, Number 4, in 1996. The paper itself was now glossy, instead of the standard "rough" paper from its early years. And the title itself had changed. Instead of the 1996 *Quest: The Magazine of Spaceflight*, it had become *Quest: The History of Spaceflight Quarterly*.

Inside the covers, subscribers would see further differences. The title of articles appeared under major groupings including "Feature Article," "Human Flight and Robotic Exploration," "Oral History Interview," "Archives and Museums," and "Book Review." On the inside of the front cover, attentive readers would note that instead of "feature writers," the new *Quest* had "editors" for each of these major groupings, which internally we called "Departments." These changes from 1996 to 1998 reflected not merely a change of publisher, but also a significant re-envisioning of the nature, purpose, and future of *Quest*.

In Part I of this series from the last issue (Volume 24, Number 3), Glen Swanson described the origins and struggles of *Quest*'s precursors and the first five years under the *Quest* title. Glen had perhaps the most difficult task of all of *Quest*'s editors, having to deal with both financial and editorial duties, and to do so essentially alone. He acted as both an editor and businessman in creating viable publications for current space events and space history. Publishing on current space events turned out to be a losing proposition due to competition from information coming out for free on the rapidly expanding Internet. By contrast, Glen found that the historical writing in *Quest* found a small but stable market. A sufficiently large group of people around the world were willing to pay for good historical articles on space topics. Even so, making *Quest* financially stable was a struggle, and the time involved for a single person to address both the business and editorial duties was at best challenging and frequently overwhelming.

Glen's interest in space led him to enroll as a student in the University of North Dakota's (UND) distance learning program for a Master of Science (MS) degree in Space Studies, which was offered by UND's Department of Space Studies (DSS). As part of that program, he discovered that UND was potentially interested in *Quest*, opening a possible way to keep the publication going. This article will discuss UND's motivations in taking on *Quest*, what changes were implemented upon doing so, and its evolution to 2005, including its sale to Space Publications in 2000. I will not use any footnotes in this article, as it is all based on my personal daily work logs, recollections, and review of issues published during my tenure as editor.

The UND Acquisition: Making *Quest* Academic

In the late 1990s, UND's DSS was a unique and entrepreneurial place. The department had been founded in 1986, with its first Masters students arriving in 1987. Dr. Chuck Wood, a volcanologist then from Johnson Space Center, became department chair in 1990. Dr. Wood saw the opportunities becoming available using the growing capabilities of the Internet, and the DSS began offering its Space Studies MS program at a distance. This enabled the department to greatly expand its student base, and by 1998 it was the largest MS degree program at UND. It was through this program that Glen Swanson became associated with UND DSS, and learned of the department's potential interest in *Quest*.

In spring 1997, I was just completing my PhD in the History of Science and Technology at the University of Minnesota, Twin Cities. Prior to starting that program in 1992, I originally trained as a physicist, had worked as an engineer from 1982-84 at Northrop Ventura Division in Newbury Park, California, and then from 1984-1992 at Martin Marietta Astronautics in Littleton, Colorado. My PhD program included a heavy dose of economic history, with my dissertation (which ultimately became the book *The Secret of Apollo: Systems Management in*

American and European Space Programs) focusing on the history of space systems management. In the spring of 1997, UND DSS was advertising for someone to teach space commerce, and my industry and academic experience fit the bill. While my industrial and economics background secured me a position in Space Studies, for *Quest*'s future, my history background was crucial.

For the department, *Quest* presented an opportunity to publicize its work, and to further emphasize its academic credentials compared to competing programs. At the time, UND DSS's competition was mainly from the International Space University and Embry Riddle Aeronautical University. UND DSS differed from both of these organizations because it was part of a full-fledged university, and enhancing those credentials would help ensure students would enroll in UND DSS's programs, as opposed to those of its competition. If *Quest* came to UND DSS, it would have to be transformed into an academic publication with full "single blind" (the identities of reviewers are kept secret from authors) or "double blind" (neither reviewers or authors are identified to each other) peer review (we eventually selected a single blind process).

Shortly after my arrival in Grand Forks, discussions about *Quest*'s future began. As Glen was researching a space history project for his MS "independent study" (a mini-thesis), he was assigned to me as my first graduate student. By late August, discussions about *Quest* became serious. If UND DSS was to take on *Quest*, I would be the one in charge of it, as I was the only historian in the department. Tenure-track faculty are generally required to perform teaching, research, and service, and in discussions with Chuck Wood, the department chair, I agreed to take it on only if this would be accounted as my primary service activity. Chuck asked me to talk further with Glen and determine the viability of UND taking ownership.

While there were a variety of issues to be addressed, the primary concern was funding. There were two issues. The long-term issue was that there were not enough subscribers at the current subscription rate to cover the full costs of publication. In theory, this could be addressed by improved marketing and expansion of the subscriber base and by increasing the subscription rate, which was increased by $5 per year. The short-term issue was a $40,000 deficit that would have to be immediately covered. As universities don't typically have money to invest in this manner, the funding would have to come from some other source. As Glen described in his Part I article on *Quest*'s history, the DSS could potentially use National Aeronautics and Space Administration (NASA) Space Grant funding to address these near term shortfalls. UND DSS was the home of NASA Space Grant for the state of North Dakota, which could cover the short-term funding issues while the subscription base was built. The question was whether Space Grant funds could be used in this way, that is, whether NASA would approve its use in this manner. Dr. Wood began discussions with NASA on the subject.

In the meantime, I pursued several courses of investigation of the viability of the acquisition. These ranged from the legal issues of transferring a publication from a small business to a state institution, the details of the finances, the processes and costs UND DSS would face for subscriptions, integration, layout, printing, and mailing, and getting the approval and support of the professional space history community. Even if all the finances and publication processes were worked out, the effort would come to naught academically unless backed and supported by professional space historians.

In the SSD, Suezette Bieri worked on many of the details of implementation of Space Grant projects. Fortunately for us, she was married to Mike Jacobs, who was the editor for local newspaper, the *Grand Forks Herald*. Personnel from the *Herald* gave us very useful advice regarding software, layout processes, and mailing. Suezette herself would assist with editing and deal with mailing and subscriptions. Space Grant hired students to work on various projects, and one of them could be assigned to help with *Quest*. Lisa Seim was the first. We would also need to hire someone part-time to do the actual layout work of integrating text and images. After the publication was transferred and active work begun, we advertised and interviewed several candidates, and hired Kathy Borgen, who became our production assistant through 2005 as *Quest* was edited by UND.

On the academic side, I started on 29 August 1997, by contacting NASA Chief Historian Roger Launius. Roger strongly supported the idea of UND taking *Quest* over and turning it into the primary journal of space history for the community. This support was vital, as we could not expect NASA Space Grant to support *Quest* financially if NASA's chief historian disagreed! Glen already had a small group of professional and amateur historians working with him, including Dr. Launius, Peter Alway, Joseph Burger, Dwayne Day, Daniel

University of North Dakota Space Studies students surround Dr. Stephen Johnson (kneeling) in 9 August 2004. Courtesy: Stephen Johnson

Professor Stephen Johnson (left) with future *Quest* editor, Christopher Gainor (center), and Dr. Eligar Sadeh (right) at graduation on 8 August 2003. Courtesy: Christopher Gainor

Gauthier, Roger Guillemette, Dennis Newkirk, Don Pealer, Joel Powell, Keith Scala, Asif Siddiqi, and Ron White. I contacted many of these as well as other space historians, finding uniformly positive support. With these and other space professionals working with us to find, write, and review articles, the academic aspect of the project would work.

While UND SSD began setting up websites, and developing plans and procedures, I began acquisition of articles for the first issue. Everything now hinged on the legal and financial arrangements. The wheels of government bureaucracy always take time, and after a nervous few months and weeks, in late February 1998, NASA approved the use of Space Grant fnnding. We contacted Glen and began finalizing the legal transfer arrangements. Over the next month, UND's legal department concluded that *Quest* needed to be a "gift." With this change to the legal paperwork, the transfer to UND was completed in April 1998.

Running *Quest*

One of my major concerns was that being editor of *Quest* was only one part of my regular academic load of teaching classes, performing research, and service. Even with help to address subscriptions, production, and mailing, I could not run the academic and "content" side of *Quest* without help. I decided on the concept of "department editors" charged with helping to find authors and help acquire and edit articles in specific areas. By dividing the content of *Quest* into major space history domains, and also into other content areas such as book reviews, with volnnteers helping in each area, my job would be "doable." For the first issue of the "new *Quest,*" these editors were: Glen Swanson for Human Spaceflight and Robotic Exploration, Summer Bergen for Interviews, Joel Powell for Technology, Ron White for Book Reviews, Bart Hendrickx for International Programs, Lieutenant Colonel Roy Houchin for Military Space, and Mary Ann Studer, who started with "Biography, Organization & Program Profiles." This last area turned out not to be useful, and she soon took over from Suezette Bieri for "Archives and Museums."

I focused on overseeing the entire effort, working with the department editors and production team, contacting and working with space historians to acquire articles, running the peer review process, and editing all content. This was greatly helped over time by my position at UND, in that both my teaching and research led me to contact space historians, archivists, and students interested in space history, all of whom could be recruited to find authors, and write and review articles and book reviews, depending on their expertise.

Of particular utility was my development and teaching of two space history classes, one on the history of spaceflight, and the other on the history of astronomy and cosmology. As these courses were all taught on campus and at a distance, the students ranged from early 20-somethings in the on-campus courses, to mid-career space professionals and space-interested students of many kinds. These included NASA and industry engineers, United States Air Force officers in various stages of their careers, foreign students from many countries, such as Canada, Germany, Japan, Great Britain, and Turkey, and a host of other professions including writers and journalists. With the students

performing their own research and writing papers for the space history classes, and some of them choosing me as advisor to do more in-depth history research for their independent study papers (and later MS theses), over eight years we acquired many high-quality papers from UND students for *Quest*. Some students, such as Chris Gainor, had already written space history books; Chris, of course is now the current *Quest* editor.

The first issue was typical of the kinds of content and quality production that the team created. It featured several high-quality articles, including a translation by Bart Hendrickx of Konstantin Lantratov's article on "Soyuz-based Manned Reconnaissance Spacecraft," an article by aerospace historian W. David Lewis on "Buzz Aldrin's Return to Earth: The Astronaut and Social Values in Apollo Era America," and an article by J.D. ("Dill") Hunley on "The Evolution of Large Solid Propellant Rocketry in the United States." The latter foreshadowed Dr. Hunley's later books on the subject. Keith Scala provided the text of an interview with famous fiction and nonfiction author Martin Caidin. We kicked off our series on space archives and museums with Rick Sturdevant providing an overview of the Headquarters Air Force Space Command History Office Archives. Sturdevant and Scala both provided book reviews. We also instituted a "chat with the author" for this issue and for every issue for the next few years. This used the Internet so that readers could "chat" with the author of one of the feature articles for that particular issue. This worked reasonably well, with a number of readers attending the chat sessions. However, its novelty faded over time and we eventually stopped it.

Over the next eight years, production of *Quest* went very well, with a few hiccups and problems along the way, and a few changes of our department editors over time. Glen Swanson helped with the transition from his company CSPACE to UND and continued as the Human Spaceflight and Robotic Exploration editor for one year. Joel Powell shifted from Technology to take over for Glen in issue 7:1, and Keith Scala took on the Technology editor role from that issue forward. Our Interviews position went to Kevin Rusnak starting with issue 6:4 (1998) to 9:3 (2002), to Jennifer Ross-Nazzal from issue 9:4 (2002) to issue 11:4 (2004), and to Howard Trace starting with issue 12:1. Influenced by Scott Sacknoff (more about Scott later), we created a "Space Business" department in issue 8:3 (2000), run by Neil Dahlstrom up to issue 9:1 (2001), from issue 9:2 (2001) by Andrew Eddy until issue 12:2 (2005), when Scott took over that department. Douglas Millard took over from Bart as International editor with issue 9:1 (2001), and Chris Gainor succeeded Keith in issue 11:1 (2004). Every now and then we were short on acquiring articles, but always managed to get sufficient materials to publish every quarter, though for issue 6:2 I had to contribute one while our acquisition system was still coming up the speed, and once later in issue 11:1 (2004) when in a mild drought for articles.

We had a few production snafus. For example, a glance at issue 9:1 (2001) shows that the year number is missing from the front cover (which was also true for 8:3 and 8:4), and at the bottom of each page it says issue 8:4! Issue 9:5 is unique in that it is the only one that has "5" as a volume number. This was not a mistake; we did that intentionally to get calendar years lined up with actual production years. The biggest error we made was in issue 10:1 (2003), in which the images associated with Dwayne Day's article on "Those Hollywood Spooks and Their Flying Machines: Spy Satellites in Film and Reality" are entirely missing. Somehow the images were lost and the layout proceeded without images as the production assistant did not realize that there "were" images. Dwayne was unhappy about that, as was I. So, for those of you who want to look at that article again, imagine how much better it would have been with the Hollywood images Dwayne originally intended there!

The most controversial article published in *Quest* during my tenure as editor was a two-part article by Peter Pesavento and Charles P. Vick, "The Moon Race End Game" in issues 11:1 and 11:2. This generated some official objections in a Letter to the Editor and response from the authors and from me in issue 11:3. It also generated off-line discussions with other space historians. In a letter to the editor, Tim Tatupu argued that the authors had violated reference standards by referring to some of their own work, and also by not referring to other space historians who had written on the U.S.—Soviet Manned Moon Race. Pesavento and Vick replied back noting that some of these references were based on journalistic standards in which not all sources can be revealed. I agreed with the critique that other citations should have been provided from other historians, and that this was a "miss" on my part. Off-line, it appeared that there were other ongoing disputes between Pesavento and Vick on one hand, and some other intelligence and Soviet program his-

torians on the other. This definitely contributed to the issues here, along with the non-standard and lack of referencing.

My main concerns at the time were two-fold, the first regarding any "breaks" in peer review, and second whether there were any factual errors in the article, as opposed to presenting a deliberately controversial point of view. I told various historians, and also in print in my "editor's comment" that if there were factual errors that these should be brought forward. None ever were, so it remains unclear to me to what extent this argument was about personality or journalistic / historical conflicts, interpretive issues (that certainly was a factor), versus factual issues. Some years after this event, I read a number of articles about problems with peer review. These described experiments with peer review, showing significant flaws in that experts fail to see or uncover obvious problems in articles. This was a case where I can point the finger at myself at not catching some obvious problems and going too easy in the review process on Pesavento and Vick due to a relative lack of articles in our acquisition pipeline at the time. However, it is also true more generally that peer review is far from flawless. Some problematic arguments, errors, and non-facts sometimes slip through the net of peer review, and one can only hope that others will catch problems upon publication at that point and bring up the factual, as opposed to "argumentation-type" issues.

Space Publications Acquisition

The biggest worry in running *Quest*, from Glen Swanson's day and continuing to this day, is the subscriber base, and hence the difference between production costs and revenues, whether from subscriptions or advertising. My daily logs of work events show periodic and frequent comments about discussions about advertising and frustrations about the inability to significantly increase the subscriber base. It always seemed likely that the potential subscriber base for space history was significantly larger than the actual subscriber base. If true, then more advertising in the proper venues should, over time, lead to increases in subscribers. In fact, UND DSS made many attempts to increase the subscriber base through advertising, word of mouth, flyers (of which UND made many), and conferences. The subscriber base did not change significantly one way or the other. Since NASA Space Grant funding was always intended as a temporary fix and would come to an end, the relative lack of subscription revenue compared with production costs remained an ongoing major concern. *Quest* might not survive over the long run.

From UND's perspective, the solution to *Quest*'s funding problems arrived with interest from Scott Sacknoff of Space Publications in acquiring *Quest*. I had learned about Scott's business through teaching my course in Space Economics and Commerce, in which I referenced and occasionally used his S*tate of the Space Industry* in my course preparations and for student reference. The first reference in my daily log about discussions with Scott about Space Publications acquisition of *Quest* is on 2 July 1999. By the middle of July, Dr. Wood agreed I should pursue these discussions, but with UND still performing the editorial work and keeping UND's name on the cover page. UND was willing to give *Quest* ownership and revenues to Space Publications, but wanted to keep the value of name association with the department and keep production at UND.

For the next several months, the legal teams worked out the details of the agreement, with proposal text going back and forth starting in July and going all the way into January 2000. By February the transfer agreement had been signed, and by March the UND SSD *Quest* team was working with Space Publications on changes, which would be implemented in issue 8:1 mailed in summer 2000. The visible changes to *Quest* starting with that issue were mostly cosmetic, with the "mini-rocket" attached to the "Q" on the cover page, different fonts used on the cover, a different image with each department first page title. A non-cosmetic change was the additional advertising starting with that issue. Subscribers now submitted their payments through Space Publications, for which instructions were updated for this and following issues. Internally, Space Publications paid UND to continue its production work, and UND sent the issue to Space Publications for printing and mailing. At that time, Scott and I discussed the possibility of moving production to Washington, DC, as this might lower costs, but that idea was not implemented at that time, or through my tenure as editor.

From my perspective and that of UND DSS, the financial burden of *Quest* was gone, along with the worries about the revenues and costs taken over by Scott Sacknoff and Space Publications. Scott and I continued discussions about advertising, increasing the subscriber base, and reducing costs. In addition, the new department of "Space Business" was put in place starting in issue 8:2, adding this important topic to

Quest's search for and publication of historical articles.

Ending the UND Relationship

In 2003, in addition to my duties at UND that included the *Quest* editorship, I also began separate consulting with NASA Headquarters on program management of the human spaceflight program, largely as a result of the publication of my book *The Secret of Apollo*. This relationship with Headquarters, combined with my previous experience with the engineering field of system health management / fault management, caught the attention of managers at NASA Marshall Space Flight Center (MSFC) to support a newly-created branch focused on system health management. In November 2004, NASA MSFC management contacted me about working for them, which would entail resigning my position at UND. After discussions for several weeks, I accepted the offer, but with the proviso that I needed to complete my spring courses that students had already signed up for, and to work with students and the department to ensure a clean transition with time for the department to hire a replacement. All of this would not be fully completed until late summer 2005.

While I could potentially have continued as *Quest* editor, giving up my position at UND at a minimum made production of *Quest* at UND problematic. Scott and I agreed that this would be a good time to shift production to Washington, DC, as had been considered back in 2000. I concluded that it would be a good time to find another editor, as I felt I had done my duty to space history as a journal editor-in-chief; it was time for some new blood!

By happy circumstance, the NASA Headquarters History Office was holding a conference on March 15-16, 2005 on Critical Issues in Space History, for which I was giving a presentation. This would be an excellent time to find a new editor, with many of the professional space historians in attendance. I made some early phone calls before the meeting to ask if there was someone that was interested in the position. As always, Roger Launius was part of those conversations. There were no obvious candidates waiting to take over. That left the meeting itself to find someone. At the meeting, I told my space historian colleagues that I was resigning my *Quest* editorship no matter what followed, and that one of them needed to step forward if it was to keep going.

David Arnold, who had contributed several articles to *Quest* over the years, talked with me after that session and expressed interest. I described the strong academic position of *Quest*, Scott's support, and suggested that this could be a good opportunity for him. After another day or two of deliberation and a discussion with Scott, David agreed.

My work with *Quest* ended with issue 12:3 (2005), and I moved on to the next phase of my career, working in engineering with NASA MSFC on new launch vehicles to replace the Space Shuttle. In that capacity I have written many engineering papers and was general editor for the first reference text for my engineering field, called *System Health Management with Aerospace Applications*, published in 2011 by Wiley.

I continued editorial work in space history as well. Not long after switching positions and career paths, I was contacted by the Smithsonian Institution about a new space history encyclopedia that ABC-CLIO wanted to develop. Working with the American Astronautical Society, I agreed to be the chief editor for that encyclopedia, eventually called *Space Exploration and Humanity: A Historical Encyclopedia*, published in 2011. The work on *Quest* with amateur and professional space historians with writing and reviewing articles gave me many necessary contacts, and made me better understand the fallibility of authors and editors alike, myself included, and hence an appreciation of the absolute rigor that is required for an encyclopedia. Despite the difficulties, I agreed to do this to provide myself with the broadest possible background for a new space history synthesis, which I work on at an extremely slow pace even today. Between the *Quest* and encyclopedia editorships, I had an excellent basis for that synthetic work. With publication of the encyclopedia and the *System Health Management* book, I have done my duty with "editorships" in my career and will from now only write single or co-authored papers and books. *Quest* was an enjoyable, challenging, and useful experience for me. I am proud of the work we did at UND Department of Space Studies, with our many volunteer editors and authors, and later with Scott Sacknoff at Space Publications to keep it alive and bring it to a high-quality academic standard. Its continued existence today is a validation of the value of that work.

About the Author

Dr. Stephen B. Johnson was editor of *Quest* from 1998 to 2005. He received his bachelor degree in physics from Whitman College in 1977, and a PhD in the history of science and technology from the University of Minnesota, Twin

Cities, in 1997. Dr. Johnson has worked in a variety of aerospace and academic positions over the years, including for the U.S. Navy, Northrop, Martin Marietta, the Charles Babbage Institute for Computer History, the University of Cincinnati, the University of North Dakota, and th University of Colorado, Colorado Springs. Currently he is the owner of his own company, Dependable System Technologies, through which he primarily works as the analysis lead for mission and fault management for NASA's Space Launch System Program, managed through the Marshall Space Flight Center. He is author or editor of many papers in engineering and space history, and several books including, *The Secret of Apollo: Systems Management in the American and European Space Program, The United States Air Force and the Culture of Innovation 1945-1965, System Health Management with Aerospace Applications*, and *Space Exploration and Humanity: a Historical Encyclopedia*. Along with his "day job" with NASA, he continues to perform research and writing in system health management, systems engineering, space history, and the history of cognitive psychology and artificial intelligence.

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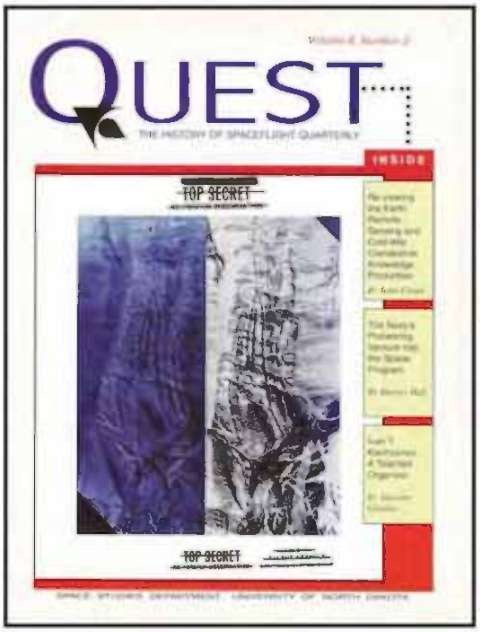
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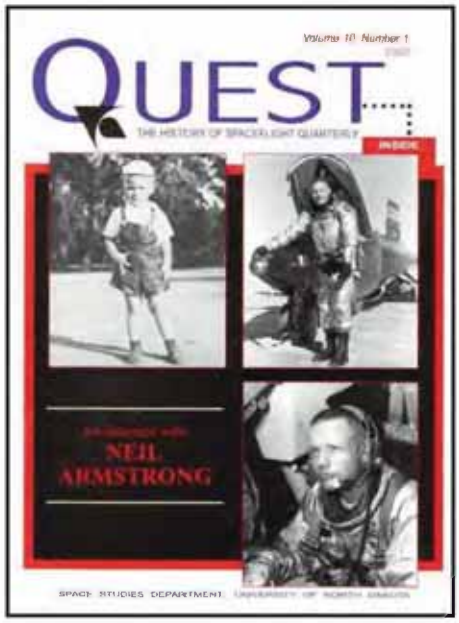
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Space History in the Wider View: The History of *Quest*, Part III

By David Christopher Arnold

Historians come at everything they write from their own unique perspective and my experiences certainly shaped my approach to editing *Quest*. I am a space historian with a military background who has studied civil and military space extensively and come to understand commercial space as the years passed. I also was very highly influenced in my own early scholarship by Thomas Parke Hughes' approaches to the development of large technological systems and by Melvin Kranzberg's "laws" of the history of technology, which often became themes around which I built a *Quest* issue.[1] James R. Hansen's 1989 article looking at a "wider view" of aviation history also influenced me in my approach to *Quest* because it helped me understand from where space history was coming and how I could help push it in new directions as editor.[2] I brought these influences, and others, to my new role.

When Stephen Johnson approached me at the 2005 NASA history conference to consider taking on the editorship of *Quest*, I was a relatively junior scholar, not yet three years out of graduate school and certainly not an "established" historian. Although I had been reading *Quest* since its rebirth under Scott Sacknoff, I had no thoughts about joining the team, let alone as general editor. But the position did intrigue me because it was a chance to stay connected to space history in a deeper way and to serve the profession. Leading *Quest* editorially was also a great way to help young scholars get their feet wet in the peer review process as I had been helped in my early work, some of which is published in *Quest*. Joining *Quest*'s leadership was also a chance to improve what I saw as some shortcomings in the journal because there is no point in taking on such a task unless you are going to make it better.

I, therefore, used the conference to talk with senior space historians I respected to see what they thought about the journal. Over dinner one evening at the conference I got a view I was not expecting from a senior scholar who told me he would not publish in *Quest* because he did not see it as scholarly. That assessment from someone whose work I respected stunned me and as *Quest* was two citations on my own still-very-brief curriculum vitae, a little bit of a crushing blow. Or, if you will, a challenge, because if a senior space historian who had been published in the flagship journals of the historical profession like the *Journal of Military History*, the *Journal of American History*, and *Technology and Culture* said *Quest* was not scholarly, that was a problem for the future of the journal within the field, quite possibly the journal itself, and possibly my professional reputation. However, despite the problems I perceived, the chance to do something special and to help contribute to the profession proved irresistible. I signed on with a plan to edit my first issue solo by the end of 2005.

From these conversations with my mentors and many friends in the field, both over food and drink and on the phone, came the development of *Quest*'s editorial board to advise me. As a new scholar in the field, I felt I needed the counsel of more experienced space historians about the journal. From these discussions with the editorial board, and others, I developed some approaches to build on Stephen's and Glen's many years of hard work by creating goals to achieve success during my tenure as editor. Success would be impossible without a plan that was both realistic and achievable. I started reviewing the leading history journals and developed goals to fill in the gaps that I saw in *Quest* in an attempt to both emulate what made those journals flagships of their fields but to do it in such a way that we did not lose the fundamental character of *Quest*. The journal had been accessible for both historians and buffs and needed to stay that way but there were some changes that could be made.

Although only making a minor course correction, I started by determining that the oral history in each issue needed to stay but that the section could be expanded in the topics it covered. Oral histories are an important piece of every *Quest* issue because they are the closest many space buffs will get to primary source material on the space program. Oral histories are more than interviews, though, they are conversations between a subject and a historian who has prepared for the discussion with

research even before asking a single question. But a quick look at the *Quest* bibliography showed a large number of astronaut oral histories and though eventually *Quest* would run out of Apollo astronaut interviews to publish, there was a much wider opportunity for the oral history section to support *Quest*'s mission. Over the years, therefore, we expanded the topics covered in the oral histories beyond astronauts to engineers, policy makers, business leaders, and scientists. Yet little happened over the years in the oral history department without the hard work of its department editor, my fellow Purdue Boilermaker Howard Trace. He has collected an amazing portfolio of oral histories that I believe are a *Quest* hallmark. On a couple of occasions when an issue was full of articles, we discussed not running an oral history but never proceeded with that approach because the oral history is such an important part of *Quest*'s contribution to the field.

Second, I wanted to expand the number of book reviews *Quest* published. A single book review in the back of *Quest* had been the standard, often a very good, in-depth review of a recent book in space history. As the flagship journals do for their fields, however, multiple book reviews are essential for sharing information and scholarship in the community. Even in space history there is not enough time to read everything that gets published. So first with Ron White and then with Roger Launius, we expanded the numbers of reviews we published every issue from two reviews in my first edited issue to averaging eight to ten by the end of my tenure. How does that compare to the flagship journals? A random recent issue of the *Journal of Military History* had over 50 book reviews in 300 total print pages of a single issue, a journal that is therefore six times the size of *Quest*. The increased number of books reviews, therefore, is contributing to the field. In addition, the book reviews in *Quest* have become so valued that quotes from *Quest* reviews are now "blurbs" on the backs of space history books!

Third, I was determined to offer peer review for nearly every submission to the journal instead of the one peer reviewed article per issue, which had been the previous process. I saw this new approach as important because *Quest* needed to be scholarly in more of its work and peer reviewing as much as possible was one way to increase the quality of the scholarship being published. Editors are, of course, responsible for what gets published in the journal so it is no surprise that I read every word in each issue multiple times but I also led the peer review process for many articles (sometimes the department editor led the process). Sometimes the peers' feedback was very positive and sometimes it was not but the feedback offered was always intended to be constructive. The advantage of *Quest*'s double-blind peer review process is that neither the author nor the reader know the other's name; only the editor knows their identities, allowing for frank feedback, sometimes including, "Don't publish this." But the feedback was very constructive and many authors created better scholarship because of the process.

Similarly, as history is a conversation and peer review is critical to that conversation, so too is offering room for debates on our pages without taking an editorial position ourselves. Among the most contentious subjects lately is the question of who "invented" the space-based global navigation system known as GPS. In several articles over several years, the debate has continued and fortunately for *Quest*, does not seem settled!

Finally, part of the peer review process as I see its development in *Quest* was the introduction in 2011 of the Sacknoff Prize for Space History, named for *Quest*'s publisher. The winner of the prize is subjected to the peer review process in the judges who sit on the panel and then in preparation for publication in *Quest*, which is part of the award. But many other submissions to the Sacknoff Prize, now in its seventh year, have, after peer review, been published in *Quest*, a sign of the quality both of the submissions from junior scholars and another good sign of the health of the field for the future.

Fourth, I tried to expand on the kinds of topics *Quest* published. For years, space history, as aviation history before it, had been accused of being too "internalist," that is, too focused on the nuts and bolts of things and not on the "wider view."[3] *Quest* needed to reflect not just the needs of space history "buffs" but also the needs of a changing field that was evolving beyond the internalist "black box." The first opportunity for me to express the wider view presented itself for the very first issue I edited alone in the form of Roger Launius's "'Got Filk?' Lament for Apollo in Modern Science Fiction Folk Music," which was a clear departure from *Quest*'s typical fare.[4] Then in 13:1 came James

Hansen's look at Neil Armstrong's participation on the *Challenger* Accident Investigation Board, an expanded piece of Hansen's biography of the first person on the Moon.[5] In the article, Hansen demystified part of the *Challenger* accident board in exactly the way he had argued needed to be done in his 1989 aviation history article. The change continued with Roger Launius's article looking at the Space Shuttle 25 years later, an attempt to insert a wider view right into the middle of a *Quest* conversation that had often only looked at Space Shuttle main engine design by placing that conversation into context.[6]

These articles were departures for *Quest*, which during Volume 12 had run articles on space suit design and human-rating launch vehicles, both very necessary but highly technical topics.[7] While technical articles about historical programs definitely stayed in the journal, other articles that followed stepped widely outside the black box, including articles on popular music (13:4), science fiction (14:3), and Walt Disney (21:2), among at least a dozen articles covering topics not often considered space history or history of technology.[8] For example, Jennifer Levasseur's article looking at the *Apollo VIII* "Earthrise" photograph explained not the technology of spaceflight or even space photography but its ability to impact society.[9]

Yet there is still an important place for black box articles and they continue valuably to fill in gaps in our understanding of the various space programs. Hansen simultaneously accepts in his 1989 aviation history article that works written by buffs, in our case space history buffs, "contain mountains of raw information [and] without them, scholars would have a much harder time finding the precise data that flesh out subjects and put major trends and evolutionary developments into focus."[10] An article, therefore, like Paul Ceruzzi's look at deep space navigation during *Apollo VIII* or Edgar Durbin's look at the Saturn I guidance and control system (both in 17:4) will still have an important role in *Quest*, which has matured as the field has widened.[11]

Another important aspect of *Quest*'s history that I came to later was through commemorative issues. Our first special, single-subject issue was dedicated to the 50th anniversary of the launch of *Sputnik* and the start of the space age (14:4). Issues like that one with its beautiful cover, or the special *Hubble* issue (17:2), which grew out of a conference at the National Air and Space Museum on the space telescope, take a lot of extra time to plan and execute but ultimately lend a special uniqueness to *Quest*, which because of its focus on the single field of the history of spaceflight, can devote time to exploring special subjects in depth and from multiple perspectives. These special issues have brought together scholars for conversations in the journal that are invaluable for the space history field.

Despite these changes, stability marked my tenure at *Quest*, unlike the amazing growth that characterized my predecessors' editorships. Nevertheless, the journal made some strides forward that helped move *Quest* from an internalist, buff-focused journal that helped get it off the ground, to a journal often focused on answers to questions like those Hansen posed for aviation. I am proud to say that by the end of my tenure, *Quest* was not only publishing work from new space historians but also from established scholars in the space field who were presenting their new research in *Quest*, scholars including Roger Launius, John Logsdon, Michael Neufeld, and many others, because *Quest* had finally grown into a scholarly journal in which they could present their research.[12] Indeed, space history as a field may be further along 60 years after *Sputnik* than Hansen assessed the aviation history field 80 years after Kitty Hawk, thanks to the leadership of scholars of space history and journals like *Quest*.[13]

Many of these superlatives are recognized, significantly, in the ways the journal and its scholarship has garnered praise with, for example, the inaugural award in 2015 of the American Astronautical Society's Frederick I. Ordway Award for Sustained Excellence in Spaceflight History.[14] Additionally, Roger Launius's article in 14:4 was given the Society for History in the Federal Government's 2008 Thomson Prize for the best article or essay by a federal historian.[15] These awards put the icing on the cake in demonstrating that *Quest* is a valuable, scholarly contributor to the field. (Praise from astronauts still resonates with us too!)

Approaching my tenth year as editor, though, as I looked back at my tenure, I came to believe it was time to turn the reins over to new editorial leadership. *Quest* was a passion for me and the assistant editors with whom I worked for ten

years, as I know it is today for your editor Chris Gainor, and for Scott Sacknoff, our inexhaustible publisher who remains devoted to making a difference in space history. Chris has infused the journal with his vision and extensive scholarly background and I look forward to reading each and every issue cover to cover of the only peer-reviewed, award-winning journal in space history.

About the Author

David Christopher Arnold was editor of *Quest* from 2006 to 2016. These views are his own.

Notes

1 See, for example, Thomas Parke Hughes, *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore: Johns Hopkins University Press, 1983) and Melvin Kranzberg, "Technology and History: *'Kranzberg's Laws'," Technology and Culture* 27:3 (July 1986): 544-560.

2 James R. Hansen, "Aviation History in the Wider View," Technology and Culture 30:3 (July 1989):644-646. Hansen was quoting a book review by aviation historian Joseph P. Corn here. I was a graduate student under Hansen at Auburn University.

3 Hansen, 643.

4 Roger Launius, "'Got Filk?' Lament for Apollo in Modern Science Fiction Folk Music," *Quest: The History of Spaceflight Quarterly* 12:4 (winter 2005): 6-14.

5 James R. Hansen, "'Mr. Inside' the Rogers Commission: Neil Armstrong's Engineering Style of Analysis in the Space Shuttle *Challenger* Investigation," *Quest: The History of Spaceflight Quarterly* 13:1 (spring 2006): 5-12. Hansen's biography of Armstrong was first published as *First Man: the Life of Neil A. Armstrong* (New York: Simon and Schuster, 2012).

6 Roger Launius, "The Space Shuttle: 25 Years On (What Does It Mean to Have Reusable Access to Space?)," *Quest: The History of Spaceflight Quarterly* 13:2 (summer 2006): 4-20.

7 Harvey Smith, "The Apollo Moon Program: Exciting Times at Hamilton Standard, *Quest: The History of Spaceflight Quarterly* 12:1 (spring 2005), 36-41; Harold Robertson, "Launch Vehicle Human Rating before the Space Shuttle," *Quest: The History of Spaceflight Quarterly* 12:3 (fall 2005): 16-31.

8 Apollo C. Vignette, "A Hit or a Myth: Critiques of the Space Race in Popular Recordings," *Quest: The History of Spaceflight Quarterly* 13:4 (winter 2006): 15-24; Larry Owens, "Sci-Fi and the Mobilization of Youth in the Cold War," *Quest: The History of Spaceflight Quarterly* 14:3 (fall 2007): 52-57; Mike Wright, "Disney and von Braun," *Quest: The History of Spaceflight Quarterly* 22:2 (summer 2014): 45-48.

9 Jennifer Levasseur, "Seeing Earth: A New Look at the *Apollo 8* Earthrise Photograph," *Quest: The History of Spaceflight Quarterly* 16:3 (fall 2009): 24-33.

10 Hansen, 646.

11 Paul Ceruzzi, "Deep Space Navigation: The *Apollo VIII* Mission," *Quest: The History of Spaceflight Quarterly* 17:4 (winter 2010): 8-18; Edgar Durbin, "Saturn I Guidance and Control Systems," *Quest: The History of Spaceflight Quarterly* 17:4 (winter 2010): 19-31.

12 See, for example, John M. Logsdon, "John F. Kennedy and the 'Right Stuff'," *Quest: The History of Spaceflight Quarterly* 20:2 (summer 2013): 4-15 and Michael Neufeld, "The Three Heroes of Spaceflight: The Rise of the Tsiolkovskii-Goddard-Oberth Interpretation and Its Current Validity," *Quest: The History of Spaceflight Quarterly* 19:4 (winter 2012): 4-13.

13 Hansen, 643, 656.

14 See "Ordway Award for Sustained Excellence in Spaceflight History," available from http://astronautical.org/awards/ordway/, accessed December 11, 2017.

15 Roger D. Launius, "Sphere of Influence: The Sputnik Crisis and the Master Narrative," *Quest: The History of Spaceflight Quarterly*, 14:4 (winter 2007): 6–18. See "Volume 14:4 Article Wins Award!" *Quest: The History of Spaceflight Quarterly*, 15:2 (summer 2008): 3.

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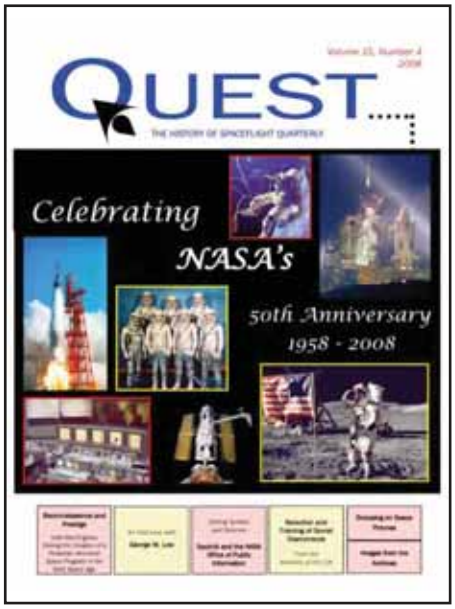
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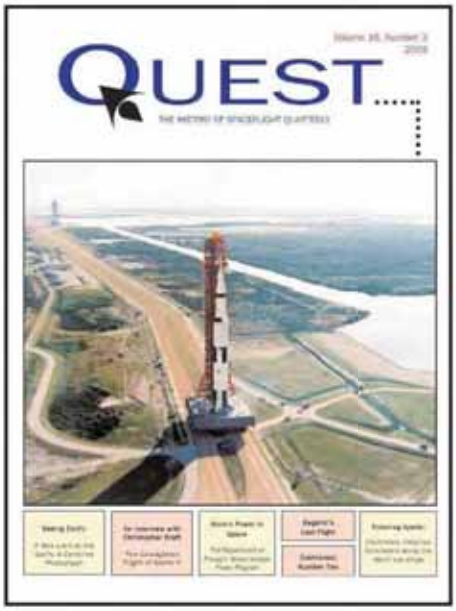
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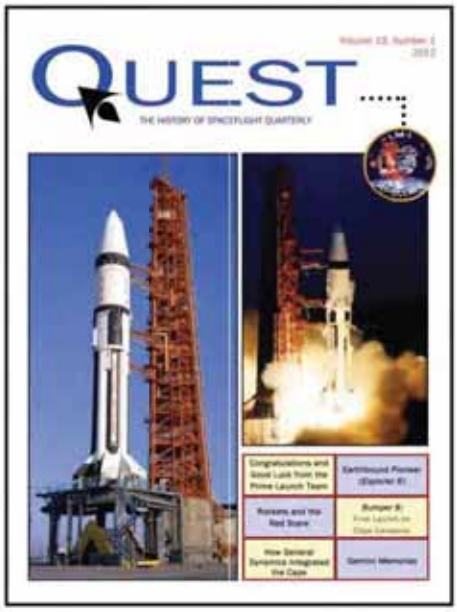
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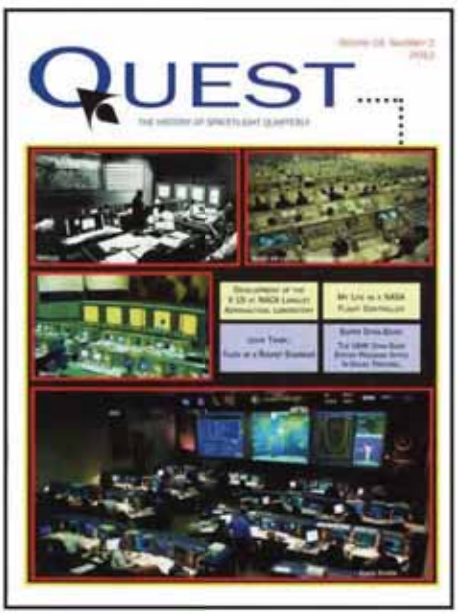
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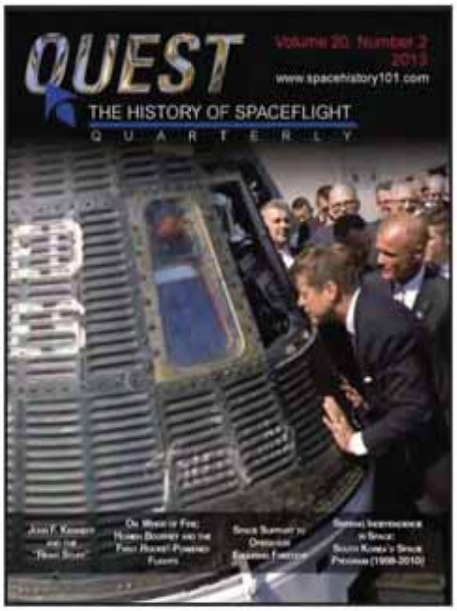
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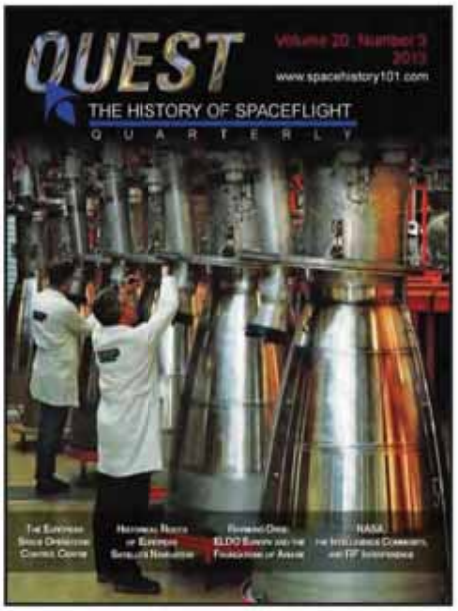
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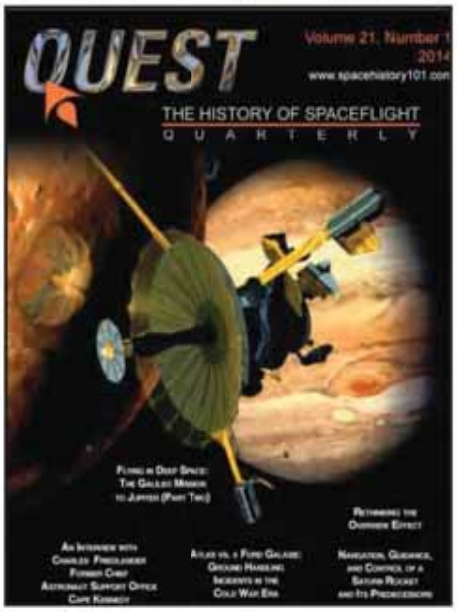
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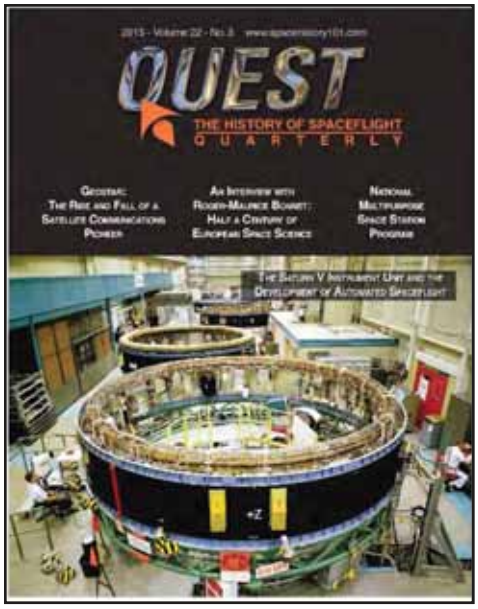


Why I Fell in Love with *Quest* (The Publisher's Perspective)

By Scott Sacknoff

Having acted as publisher of *Quest* since Volume 8, it made sense (at least to me) to document the evolution of *Quest* from my viewpoint alongside those from the editors—Glen Swanson (Vol. 1–5), Stephen Johnson (Vol. 6–12), and David Arnold (Vol. 13–23). Each brought their own unique perspective reflecting what they thought *Quest* should be.

As described in Dr. Johnson's article "From Magazine to Journal: The History of *Quest* Pat II—The University of North Dakota Years, 1997-2005" in issue 24:7, my involvement began after a call from Dr. Johnson. We had previously become acquainted through his research interest interest and teaching a course on commercial space and my background as a consultant studying the "business of space"—a phrase I trademarked "™" but never filed to my chagrin. At that point I had been publishing the *US Space Directory* (later the *North American Space Directory*) and had launched the annual *State of the Space Industry* report, which provided a broad overview of the space industry including business and financial data.

The story, which may contain some literary license but is essentially accurate, is that Stephen was visited by a University of North Dakota administration person who asked,

"So, I understand we are publishing a space history magazine?"

"Yes."

"Does it make money?"

"No, and it appears that it will be very difficult to do so."

"Do you market it?"

"Yes we have worked on that, but, we are professors we are not very good at it;, we are pretty good at acquiring articles and publishing."

Upon which it was suggested that *Quest* find a publisher who would bear the financial responsibility.

Aware of my interest in space and my understanding of publishing, Stephen called and asked if I knew anyone who could publish it. The university still wanted to be the editor and use *Quest* as a marketing tool to continue to put the University of North Dakota's Space Studies program on the map. As I knew *Quest* and had read it in the past, I was happy to help. Before doing so though, I needed to see some data—the number of subscribers and, more important, how much the magazine was losing.

It turned out that the publication was about $6,000/year in the red, and I was surprised to learn there were just 700-odd subscribers. At the time, the National Space Society had roughly 30,000 members and the Planetary Society had over 100,000 supporters. With the advent of internet 1.0 and mainstream articles constantly harping that content was the key to the future, I saw the untapped potential of *Quest*.

But this wasn't all about the business. Years before, I had worked as a NASA contractor for the Office of Commercial Programs, and my office was directly across from the storage room that the NASA Education Office used for teacher materials. I was a frequent visitor to that room, and anytime I met a teacher outside of work or at an event, I prepared a package for them to use with their students. It was a win-win as far as the people in Education were concerned, because I was helping them with their mission…and it personally felt good to provide teachers with limited resources access to materials that they didn't know existed. Over time, I noticed that this room had a range of materials not designed for educational use. Retiring employees or people cleaning out their bookshelves would drop off old NASA history books, papers, and media. Most of this I learned ended up in the trash. Among those materials was a very oversized book that some research revealed was one of the 300 copies NASA printed using Navy lunar imagery so they could choose the Moon landing site. Almost all of these books had been destroyed because they were too big to fit on any bookshelf. (I donated it to the NASA Headquarters library.)

Additionally in my travels I regularly heard stories from people who worked in the early days of the space program and who had historically relevant materials that they eventually discarded because they didn't know who to turn to. Although not a historian or archivist by training, I was beginning to recognize the value in history and a greater need for historical preservation.

The question, as for many similar efforts, was how to pay for it. For years I joked when asked about the cost for an annual subscription to *Quest* that their price was $29.95/year, mine was $6,000. An amount I was prepared to personally expend at least for the short term. (Nearly 20 years later, the price for readers remains the same.)

Shifting activities from the University of North Dakota support staff who continued to work on production after the change in editors from Dr. Stephen Johnson to Dr. David Arnold enabled me to bring the costs for *Quest* down. For example, changing to a printer that specialized in journal production for large institutions, like MIT and Johns Hopkins University, saved money. Likewise, I engaged the graphic artist I used for my day job to create a mock-up for the interior and engaged Joni Wilson, an experienced copyeditor familiar with space terminology, to assist with proofreading. Through these efforts I was able to get *Quest* to break-even operationally.

Over the course of time, I learned that the market for space history wasn't as large or broad as I had thought; it was much more segmented. I had hoped to get corporate support and offer *Quest* free so it could reach a broader audience, but quickly learned that companies and institutions were more interested in current and future programs—as an element of business development—than preserving the past. Enthusiasts were also highly segmented. I remember a conversation with a former long-time subscriber who had a laser-like focus on the *Apollo 8* mission and who said he would buy any issue we produced that contained a discussion on it. If the current issue covered *Apollo 9* though, never mind. That said, I am still at a loss to understand why all of the space enthusiasts who engage on collectspace.com or spend thousands to attend an astronaut autograph or anniversary event are not engaging in what remains the only peer-reviewed history journal exclusively focused on space.

Quest never really did make any money, but I came to understand and appreciate just how important it was to those who did support and enthusiastically read every issue. The historians at the Smithsonian National Air and Space Museum, especially Roger Launius, have played a critical role and have imparted to me an understanding that the value of the journal is providing a resource for historians, professors, and students to publish and share their research.

In my time at *Quest*, the journal itself and several papers published therein have received outside recognition, including the inaugural Fred Ordway Prize for Space History from the AAS and recognition from the Society for the History of Technology and the Society for History in the Federal Government.

I am constantly amazed that after nearly 30 years in the space industry, I continue to read stories in *Quest* that introduce me to people and activities I was unfamiliar with and that provide me with a new perspective—whether it's dramatic mission details of near tragedies on *Gemini 8* or *Apollo 12*, behind-the-scenes practical jokes the astronauts and staff played among themselves, or the politics in play at various times of the space program. Reading

the first-person interviews and stories of the space program never ceases to fascinate me—and hopefully it fascinates our dedicated readers as well.

Quest has provided me personally the opportunity to meet many of the heroes of the Space Age, the astronauts and people who were responsible for making it happen. It is an honor that Jim Lovell, Fred Haise, and Neil Armstrong were regular readers and would discuss articles with me when we crossed paths. A great moment of joy came last year when I had the opportunity to talk with *Quest* reader and astronaut Michael Collins, who told me that "it is truly amazing how we are able to produce something so detailed yet readable."

Like everyone else involved with *Quest*, I've always thought of myself as a volunteer and it wasn't until several years after I began helping out that I actually added my byline as publisher to the masthead.

I've been asked more than a few times how long I plan to continue to do this. I believe that *Quest* continues to play a valuable role, and I believe our marketing subhead says it best, "Preserving the history of spaceflight…one story at a time." The question I've been asking is, where does *Quest* go from here?

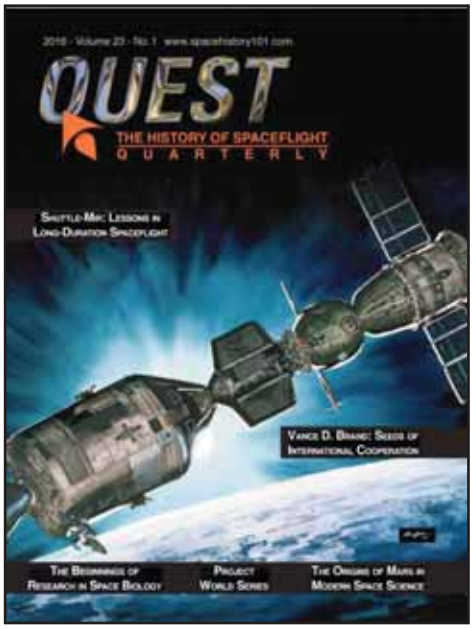
In recent years, I helped launch the Space Business & Commerce Archives to collect and archive materials focused on the commercial and business side of the space industry. The Archives is a place where people and organizations can donate materials, and we review them for historical significance to ensure documents, materials, and artifacts are not simply discarded and lost to time.

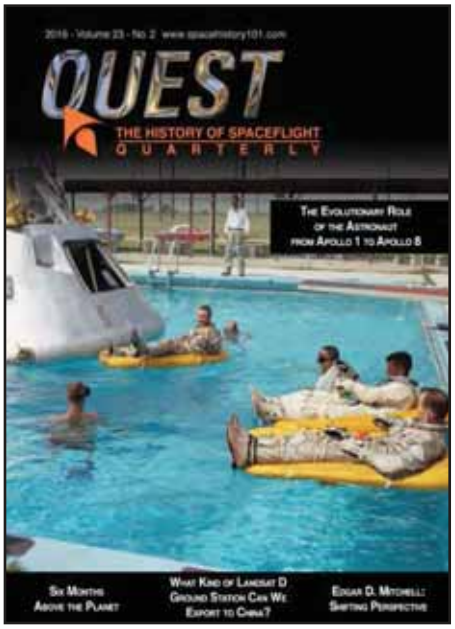
Since 2011, I have also sponsored the Sacknoff Prize for Space History to encourage university students of all ages and backgrounds to research and write about space history. Each year, I have been impressed with the submission quality and range of topics covered.

And coming in 2018, I am launching perhaps the most important initiative—one that I hope will ensure the long-term stability of *Quest*, the Archive, the Prize, and other efforts. Space 3.0 is a 501(c)(3) charitable organization designed to build an endowment and issue grants that can be used to preserve the history of spaceflight, engage/lead a dialog to determine what needs to be done to ensure the space future many of us believed/expected, as well as fund necessary research and projects. Just imagine if a foundation had been established in the 1960s when John Glenn first flew or *Apollo 11* landed on the Moon. Small sums donated by individuals and reinvested could have resulted in an endowment worth billions today. [More details about the Foundation and how to help us secure the future of space will be made available in the coming months. If you'd like know more or help craft this vision, please send me an email.]

The most important thing I can convey is my gratitude to everyone who has contributed their time—whether it was for an article, a book review, or a peer review; the editors who sought out materials; or those helping with graphic design and proofreading. *Quest* exists today because of each and every one of you.

Scott Sacknoff, Publisher
Quest: The History of Spaceflight





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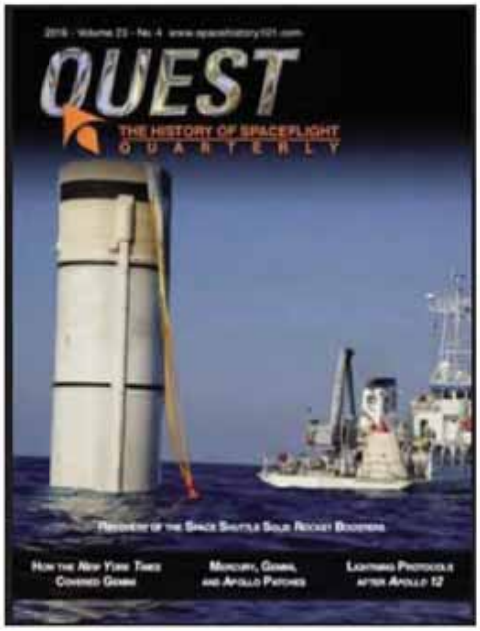
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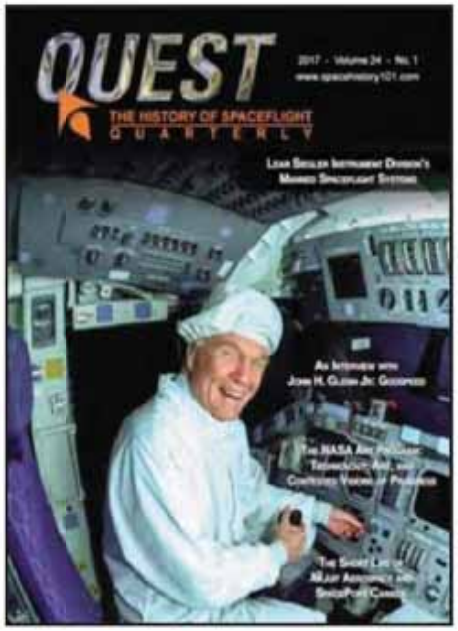
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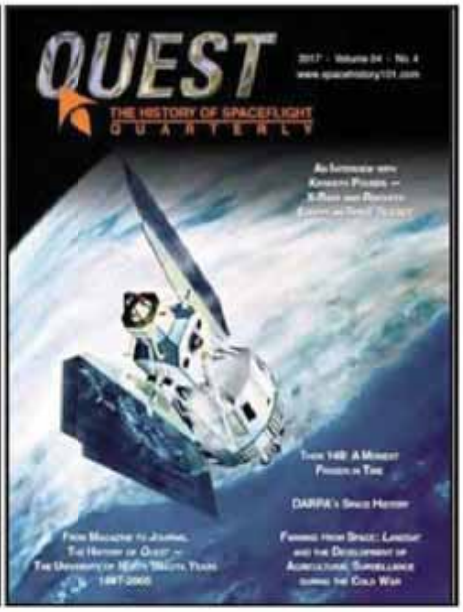
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DARPA's Space Heritage

EDITOR: Glen Swanson

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Editor: Dr. Stephen Johnson

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- An Interview with Gemini and Apollo Flight Controller John Aaron

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- Canadian Radarsat Program," by Howard Edel, Edryd Shaw, John Falkingham, William Jefferies, Dave Wilson, and Gary Borstad
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