Storytelling in the JPL Library: From Practice to Theory

By: Teresa Bailey, Senior Technical Librarian
Jet Propulsion Lab, California Institute of Technology
Jet Propulsion Lab

Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
1936 – Suicide Squad members take a break during rocket testing in the Arroyo Seco

1958 - Explorer 1, America's first Earth satellite built and operated by JPL.
Space Exploration
Doing What No One Has done Before

JPL
Jet Propulsion Lab
California Institute of Technology

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
Inspired by Organizational Storytelling Research


Storytelling for Community Building
the Framework for JPL Stories

The stories should be experienced in person (the best way to transfer tacit knowledge is with face-to-face discussion).

Don’t record the stories, let the tellers be as candid as possible.

Hold the stories in the JPL Library and keep the setting informal.

The assumption, every JPLer has a JPL story.
Criteria for the Stories

The only criteria for the storyteller is that the story they tell has to be a personal story about a JPL experience. Which story to tell is entirely their decision.

I encourage them to be as creative as they’d like and I tell them that stories can take place in the past, present, or future; they can be historical or make-believe (such as a dream for the future); and they can be light-hearted or serious.
Criteria for selecting storytellers

Recommendations from other storytellers and story listeners.

“Cold calls” to JPL employees and retirees (identified through their reputation, position, or through news articles).

We seek to include a cross-section of JPL current and former employees, including “old-timers”, mid-career, and more recently hired staff.

Selection focuses on inclusion and attention is made to provide a mix of scientists, engineers, administrators, and managers.
Hi Olga,

I coordinate the JPL Stories series in the Library and in a discussion I had with Debra Bass about your interest in participating as a storyteller and sharing your experiences in Iraq. The JPL Stories program has been underway since February 2000 and has received very positive feedback from both the audience and the storytellers and overall can be best described as a "feel good" experience.

I am currently coordinating stories for October 27th and December 15th -- please let me know if you are interested in participating and if so if you'd be available on either of these dates. We hold the stories monthly usually on a Thursday from 4-5 pm in the Library customer service area. Usually about 40-60 JPLers attend.

The only criteria for the stories is it has to be your personal JPL story (there's more information below).

The following is some information about the Library storytelling series. There are examples of flyers (PDF versions) and a list of past and future JPL Stories at http://beacon.jpl.nasa.gov/WhatsNew/JPLStories.htm and there is a story next week, July 21st if you'd like to attend and we could meet.

**Storytelling at the JPL Library**

The concept for the JPL Stories series is to provide an informal and experiential environment for both the storyteller and the audience. The stories take place in the main customer service area of the Library, which is the ideal location for the warm and friendly atmosphere we want. The plan is to keep the program as flexible as possible and include a cross section of storytellers from the JPL community. Stories entertain, influence, teach, inform, and uplift. Stories can take place in the past, present or future; they can be historical or make believe; and they can be light-hearted or serious. They're an effective way to communicate and understand an organization's culture and can help employees develop a sense of organizational identity. Stories offer an approach different from the more formal lectures, seminars and town halls we have at JPL -- stories offer another way to be a part of the discussion.

If you decide to participate -- What I'll need from you at least 6 weeks before your story:

- The title of your story and a couple sentences of what it's about for the advertisements at least one month prior to the story.
- Biographical information about you for the short introduction that I do.
- Will you allow the story to be audio taped and/or videotaped?
- Will you need an laptop, computer projector or other equipment (this is not meant to be a PowerPoint presentation but many of the past storytellers have used images and timelines to help with the details)?

If you'd like to talk more about storytelling please contact me. Also, please rely to this message, I hope you'll be interested in participating.

Sincerely,

Teresa
Email Announcement on the Library Discussion List

To: "LARS InfoBytes" <lars.infobytes@list.jpl.nasa.gov>
From: Barbara J Amago <barbara.j.amago@jpl.nasa.gov>
Subject: JPL Story, "Automated Business Systems: the Myth, Mystery and Magic" by Marc Montgomery
List-Unsubscribe: <>
Reply-To: Barbara J Amago <barbara.j.amago@jpl.nasa.gov>

LARS InfoBytes May 9, 2002 by Teresa Bailey

You are invited to the "JPL Stories" series at 4:00 p.m. on Thursday, May 23rd in the Library, west end of Building 111.

Marc Montgomery, Manager, Institutional Business Systems Division and Manager of the New Business Solutions (NBS) Project will present, "Automated Business Systems: The Myth, Mystery and Magic." Come hear some random musings from the front lines on the joys, puzzlements, and miseries of implementing enterprise-wide business systems.

For a copy of the flyer please see

The JPL Stories program, sponsored by the Library, Archives, and Records Section, celebrates the Lab's unique environment and history, and provides an informal way for JPLers to share their stories with each other. For more information about the JPL Stories series, if you have a JPL story to tell, or if you have suggestions for future stories, contact Teresa Bailey, x4-9233.

Barbara J. Amago, Editor LARS.InfoBytes
Phone: (818) 354-3183
Design a Flyer/Poster

JPL Stories

Deep Impact, The ACME Comet Collide-O-Tron

Presented by Steve "Buzz" Collins, Deep Impact Attitude Control Guy #3

The Coyote finally wins one. It started as a hare-brained scheme, but the long hours of hard work paid off, and our contraption intercepted its speedy adversary with "ground breaking" results. Come hear a collection of amusing anecdotes from our dogged pursuit of comet Tempel-1.

Everyone is welcome.

JPL Library
Customer Service Area
west end of
Building 111
Room 104

Jet Propulsion Lab
California Institute of Technology

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
Examples of Early Flyers and Posters

---

**JPL Stories**

- **Green Eggs and Ham**
  - *JPL Style with Salsa*
  - presented by Sarah Gavit "Suess"

- **Things that Go Bump in the Dark or How Spacecraft Fail**

*JPL Library, Customer Service Area, west end of Building 111 Room 104*

All Employees are Welcome

---

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada

Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
Flyers and Posters in the Template

**JPL Stories**

**AIRBAGS, THEY'RE NOT JUST FOR CARS ANYMORE!**

Presented by Tom Rivellini, Aram Cognizant Engineer for the Mars Pathfinder Project, Entry, Decent, and Landing (EDL) Mechanical Systems Lead for Mars Science Laboratory (MSL), and Deputy Mechanical Systems Architect for Mars Exploration Rovers (MER)

**JPL Library, Customer Service Area, west end of Building 111, Room 104**

Everyone is welcome.

**JPL Stories**

**MER: Disaster Averted?**

Presented by Rob Manning, MER Systems Engineering Manager and EDL Development Manager

**JPL Library, Customer Service Area, west end of Building 111, Room 104**

Everyone is welcome.
Posters at the Cafeteria Entrances
Thursday, October 27, 2005

Mentor Graphics International User Conference
9:00 am, San Jose, CA
Interactive technical conference.

"Genesis - What really happened at UTTR?"
4:00 pm to 5:00 pm, in the Library, west end of Bldg. 111
Discussion of what really happened to Genesis Sample Return Capsule on the Utah Test and Training Range.
Calendar announcement

Jet Propulsion Laboratory
Calendar

Calendar Item Detail View

"Genesis - What really happened at UTTR?"
Don Sweetnam, Genesis Project Manager
Thursday, October 27, 2005, 4:00 pm to 5:00 pm
in the Library, west end of Bldg. 111

Many of us are familiar with the precision delivery of the Genesis Sample Return Capsule to Earth at the Utah Test and Training Range (UTTR) on September 8, 2004, including the final seconds of a tumbling capsule plunging to the surface. This talk starts at that fateful moment and works back through time with an audio and video travelogue of the preparation and training for NASA's first sample return since Apollo. See training footage of the helicopter mid-air capture (including a rare clip of a novel technique for stowing the parafoil). Watch a small army of scientists, bending over a fractured canister with C-clamps, hack-saws, spoons and tweezers, scramble to recover and preserve the solar wind collector payload.

- Part of the JPL Stories
- Sponsored by Library, Archives and Records Section
- For further information:
  Teresa Bailey, JPL Library teresa.r.bailey@jpl.nasa.gov 49233
"Genesis - What really happened at UTTR?" with Don Sweetnam, Genesis Project Manager, is another in a series of "JPL Stories." Many of us are familiar with the precision delivery of the Genesis Sample Return Capsule to Earth at the Utah Test and Training Range (UTTR) on September 8, 2004, including the final seconds of a tumbling capsule plunging to the surface. This talk starts at that fateful moment and works back through time with an audio and video travelogue of the preparation and training for NASA's first sample return since Apollo. See training footage of the helicopter mid-air capture (including a rare clip of a novel technique for stowing the parafoil). Watch a small army of scientists, bending over a fractured canister with C-clamps, hack-saws, spoons and tweezers, scramble to recover and preserve the solar wind collector payload.

If you would like a copy of the flyer to post in your area, please see http://beacon.jpl.nasa.gov/WhatsNew/Stories/Sweetnam.pdf

Thursday, October 27, 4 to 5 p.m. west end of Bldg. 111. For more information about the JPL Stories series, if you have a JPL Story to tell, or if you have suggestions for future Stories, please contact Teresa Bailey, x4-9233.
Announcing the stories – Lab online newsletter

Daily Planet

November 15, 2004

Today's Feature

Manning at Library Tuesday

(posted November 11, 2004)

Join Rob Manning, Mars Exploration Rovers systems engineering manager and entry, descent and landing development manager, for “MER: Disaster Averted?” on Tuesday, Nov. 16, at 4 p.m. in the Library, Building 111-104.

FULL STORY

JPL Weather

Jet Propulsion Lab
California Institute of Technology

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada

Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
Announcing the stories – Library Web site

BEACON—Library, Archives, and Records Section

November 1, 2006

Events:
- Library Tours: Wednesdays 11:30
- Road Show: 10/18 303 Cafe, 10/25 167 Cafe, 11/1 303 Cafe
- JPL Story 10/27
- Finding Information on the BEACON web site 1/12/06 (Sign up at http://wrlat)

Did You Hear

All AIAA Journals Now on BEACON

AIAA journals are now available online back to issue one!

You can now access AIAA journal articles online back to volume one courtesy of the JPL Library's subscription. Titles include:
- AIAA Journal
- Journal of Aircraft

Thursday, October 27th, 2005

The next JPL Story is scheduled for Thursday, October 27th, from 4-5 p.m., with Don Sweetnam, Genesis Project Manager, presenting, "Genesis - What really happened at UTTR?" Many of us are familiar with the precision delivery of the Genesis Sample Return Capsule to Earth at the Utah Test and Training Range (UTTR) on September 8,
Listing of past and future stories

http://beacon.jpl.nasa.gov/WhatsNew/JPLStories.htm

Beacon - Library, Archives, and Records Section

What's New

The next JPL Story is scheduled for Thursday, October 27th, from 4-5 p.m. with Don Sweetnam, Genesis Project Manager, presenting, "Genesis - What really happened at UTRR?" Many of us are familiar with the precision delivery of the Genesis Sample Return Capsule to Earth at the Utah Test and Training Range (UTTR) on September 8, 2004, including the final seconds of a tumbling capsule plunging to the surface. This talk starts at that tailored moment and works back through the time with an audio and video travelogue of the preparation and training for NASA's first sample return since Apollo. See training footage of the helicopter mid-air capture (including a rare clip of a novel technique for stowing the parachute), watch a small army of scientists, bending over a fractured canister with C-clamps, hack-saws, sponges and tweezers, scramble to recover and preserve the solar array collector payload.

The JPL Library, Archives, and Records Section sponsors the monthly series "JPL Stories" - the concept is to provide an informal and experiential environment for both the storyteller and the story listeners. The stories take place in the main customer service area of the Library, which is the ideal location for the warm and friendly atmosphere it offers. The plan is to keep the program as flexible as possible and include a cross section of storytellers from the JPL community. Stories can take place in the past, present or future, they can be historical or make believe, and they can be light-hearted or serious. They're an effective way to communicate and understand an organization's culture and can help employees develop a sense of organizational identity. Stories offer an approach different from the more formal lectures, seminars and town halls we have at JPL - they offer another way to be a part of the discussion. Several stories are in the planning stage - watch for "JPL Stories" flyers, posters and announcements. If you have questions or suggestions about the JPL Story series or if you wish to participate, please contact Teresa Bailey at ext. 4-9233 or teresa+bail@jpl.nasa.gov.

<table>
<thead>
<tr>
<th>Story Title, Storyteller and Story Date</th>
<th>Flyer (PDF)</th>
<th>Story on the Story</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ola Curtiss and Erik Tiesmeyer / Title TBD / December 15, 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steve Collins / Title TBD / November 17, 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don Sweetnam/Genesis - What really happened at UTRR?/October 27, 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancelled/Pete Tiesmeyer / MIER: A Retrospective from the Top / TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Albert Haldeman / Mars One Rock at a Time / July 21, 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosalyn Lopes / Volcano Adventures on the Earth and Planets / June 16, 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shaun Standley / Hitchhike to Titan: Huygens' Journey to the Shrouded Moon / May 19, 2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ellis Miller / A JPL Scientists Explores into the Strange World of Public Communications / February 24, 2005</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
JPL Library Customer Service Area - Before
Setting up

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
JPL Library Customer Service Area - After

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
"Things to Keep" presented by Larry Dumas
Universe Article about the first story

'Things to Keep' kicks off story series

The Library's "JPL Stories" series got off to a successful start last week as Deputy Director Larry Dumas related his thoughts on the Lab's culture over the years.

Dumas' talk, "Things to Keep," noted that in the face of many changes JPL has adopted recently, its success is due in large part to a number of factors that indeed do not change over time.

Among those he noted were employees' ability to understand how things work; the ability to find the root causes of problems; relentless peer review; healthy skepticism; JPLers setting very high standards for themselves; and "a deep and abiding faith that we will succeed, with a sufficient application of persistence and intelligence."

The talk also included a question and answer session. About 65 people attended, said librarian Teresa Bailey.

"We received enthusiastic responses from several people in attendance, who really liked the informal storytelling format," she said. "One of our goals for this series is community building, allowing people to be part of the discussion."

The series is scheduled to be presented monthly. Bailey said. The next scheduled story at the Library, Building 111, is for March 23 at 4 p.m. The presenter will be Sarah Gavitt, manager of the Interstellar and Solar Sail Technology Program.
Attendence

"Jet Propulsion Laboratory - the Early Years"
Presented by Dr. William Pickering

"Genesis - What really happened at UTTR?"
Presented by Don Sweetnam

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
The Survivor Adventure: Bikini Models, Gym Teachers, "Rocket Scientists" Oh My!
Presented by Dave Johnson
Two or more Storytellers at one Time

"Discovery of Sulfur Dioxide on Jupiter's Satellite Io, A Personal Perspective of Two Scientists" presented by Bob Nelson and Bill Smythe

"The True Story Behind the Mars Pathfinder Success" presented by Rob Manning, Brian Muirhead, and Richard Cook

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada

Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
Most media intense
Paul Weissman – “All Good Spacecraft Don't Go to Heaven”
Props and Audience Participation

"Ranger and Luna: Our Early Lunar Missions and Our Tracking of Theirs"
Presented by Jim Burke

"Io, the Ultimate Destination for a Volcano Lover"
Presented by Dr. Rosaly Lopes

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
JPL storytelling series focuses on the experience

There is something wonderful about going down to a library, sitting with my friends among the books, and hearing a master storyteller weave a tale. Besides being entertaining, it is a great way to learn ... the process taps into a crucial capacity the human animal has for imparting wisdom from older generations to younger ones through storytelling. Really, it was a peak experience for me, like meeting a wonderful person for the first time, or seeing a rare and exquisite sunset. I'm going to remember this for a long time.

Jay Breidenthal, JPL System Engineer
Story listener

When Teresa Bailey asked me to tell a story, I hardly knew how to respond. It has been my experience that I connect best with JPLers in small groups in an informal setting, where there is an opportunity for dialogue. This was a little different, though, sitting among a group of colleagues and sharing some of the things that have been most meaningful to me. I can't speak for the listeners, but it turned out to be wonderfully satisfying for me. I am grateful for this new way of giving meaning to the present by reflecting on the past.

Larry Dumas, JPL Deputy Director
Storyteller
Inspiration from Theory

Karl Weick – Concept of “sensemaking” – every leader is an author and a historian and do whatever you can to increase the variety of the language with which you work.

Polanyi – Differentiated Tacit knowledge and Explicit knowledge. Tacit knowledge is personal, context-specific, and therefore hard to formalize and communicate – has to be communicated face-to-face. Explicit knowledge, on the other hand, is transmittable in formal and systematic language.

Nonaka and Takeuchi – Concept of the knowledge creation spiral – Tacit knowledge and explicit knowledge are not totally separate but mutually complementary entities.
Personal Storytelling: From Self Knowledge to Collective Knowledge

Collective knowledge
(Ackerman et al, 2003; Bohm, 1994; Bauman, 1999; Polanyi, 1967)

Self development: knowledge/experience/identity/memory
(Damasio, 1999; Dowes, 1916, 1933, 1991; Eakin, 1999; Mead & Morris, 1934; Mishler, 1999; Polanyi, 1967)

Knowledge sharing/learning organizations

Organizational storytelling/Sensemaking
- (Boje, 1995; Boje, 1996; Denning, 2000-2004, 2001; Gabriel, 1995; Neuhauser, 1993; Smith & Keyton, 2001; Snowden, 1999; Weick, 1995)

Performance and story

Story/narrative/autobiography
(Bruner, 1986; Denzin, 1968; Fisher, 1987; Johnson, 1987; Polkinghorne, 1988; Schank, 1995)

Motivation to share a story
(Erikson, 1980; Fianagan, 1996; Sarbin, 1985; White & Epstein, 1990)

Dissertation title: THE EXPERIENCE OF THE STORYTELLER: A COMPONENT OF KNOWLEDGE SHARING IN ORGANIZATIONS

Research Question: What is the experience of the storyteller in sharing a personal story about their work in the JPL Stories program?

©Teresa Bailey
Denning’s expanded list of reasons for using storytelling in organizations

- Stories have salience to the lives of people in organizations
- Stories help us make sense of organizations
- Storytelling is quick and powerful
- Storytelling is free
- Storytelling skills are easily upgradable
- Narratives communicate naturally
- Storytelling communicates collaboratively
- Storytelling communicates persuasively
- Stories can communicate holistically
- Storytelling communicates context
- Storytelling communicates intuitively
- Storytelling communicates entertainingly
- Storytelling communicates movingly so as to get action
- Storytelling flies under the corporate radar
- Storytelling communicates feelingly
- Storytelling communicates interactively
- Storytelling is memorable
- Storytelling spurs double-loop learning
- Storytelling is key to leadership
- Storytelling builds authenticity
- Storytelling re-connects the speaker with the spoken
- Storytelling re-connects the knower to the known . . . [and]
- Stories are a large part of the economy. (pp. 167-172)

Organizational Storytelling Books


JPL
Jet Propulsion Lab
California Institute of Technology

49th ANNUAL MILITARY LIBRARIANS WORKSHOP December 5-9, 2005 Las Vegas, Nevada
Storytelling in the JPL Library by Teresa Bailey, Jet Propulsion Lab
Storytelling Web Sites

Storytelling: Passport to Success in the 21st Century
Larry Prusak, John Seely Brown, Steve Denning, and Katalina Groh
http://www.creatingthe21stcentury.org/

A Workshop of Organizational Storytelling April 11-13, 2003 co-sponsored
by the Smithsonian Associates and the Golden Fleece Group
http://www.creatingthe21stcentury.org/Introduction.html

National Storytelling conference July 7-11, 2004 sponsored by the National Storytelling Network
With several of the sessions focusing on organizational storytelling including:
• Using the “Water Cooler”: Stories at Work to Change the Organizational Culture
• Passing the Torch: How Great Leaders Impart Mission, Vision, and Values Through Storytelling
• The Role of Storytelling in Knowledge Management at NASA
http://www.ac.wwu.edu/~rvohs/NSC2004/NSC_sessions.html
Storytelling Discussion List

In 2000 Seth Kahan http://sethkahan.com/ started the StorytellinginBusiness discussion list later became WorkingStories discussion list

To join:
WorkingStories mailing list
WorkingStories@lists.gjhost.com
http://lists.gjhost.com/mailman/listinfo/workingstories

The Web site
Web site http://www.storyatwork.com/
There are thousands more JPL Stories!

Every time I come to one of the JPL Stories, I walk away thinking how lucky I am to work at such an amazing place with these world-class people. Please keep up the great work – and I look forward to hearing many more stories in the future!

Michele Judd
Development Liaison
Section 367 – Exploration Systems Autonomy
The End

If you’d like to talk more about organizational storytelling
Please contact me at teresa.r.bailey@jpl.nasa.gov