

CREATING A DIGITAL SMITHSONIAN



DIGITIZATION STRATEGIC PLAN



Smithsonian Institution

Fiscal Years 2010–2015

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CREATING A
DIGITAL SMITHSONIAN

Introduction

Picture a room with infinite capacity. It is absent cabinets or shelves, yet it holds tens of millions of objects and records — scientifically invaluable specimens, artifacts that connect us to our heritage, and research findings from some of the greatest minds in the world.

Delving into its contents, a schoolgirl sitting in a North Dakota classroom can hear the voices of Jane Addams and Linus Pauling plead for peace in earlier times. A research scientist in Bangladesh can consult the work of Smithsonian conservationists to help endangered Asian elephants survive in the wild. A biographer in Boston can view every item in the Smithsonian collections — across media and museums — that pertains to John Quincy Adams. And with all the room holds, it can accommodate infinitely more.

The 137 million objects in the Smithsonian's vast and irreplaceable museum collections and their supporting data, our programs, and the immense holdings of our libraries and archives and research centers represent millions of years of chronological time, myriad peoples and nations, and a wide cross-section of disciplines, many of which are unique to the Institution. Taken as a whole, they are among the most beloved — and valuable — resources ever assembled by humankind.

What if we could — simultaneously and exponentially — broaden access to those treasures, safeguard them for future generations, speed research, add meaning, encourage collaboration, and integrate our holdings across museums and programs? Such an endeavor would further each major goal put forth in the Smithsonian's strategic plan. More than an opportunity, it is an imperative.

Creating a Digital Smithsonian is an ambitious five-year plan that lays out how we will accomplish digitization — the activity that will help us realize these benefits. It outlines strategies to digitize our collections and research holdings along with the descriptive, interpretative information that accompanies them. It recognizes that the Smithsonian is poised on the edge of a new era, one where the power of technology can combine with Smithsonian resources to create unprecedented access. Digitization is one of the best investments we can make in our future.

SAVING DIGITAL ULTRASOUNDS. Pregnancy is an especially difficult condition to determine in giant pandas, one of the world's most endangered species. Digital ultrasounds taken of the National Zoo's Mei Xiang, before she gave birth to cub Tai Shan, are now part of a database that will help veterinarians better assess panda reproduction and ensure the species' ability to thrive both in captivity and in the wild. (<http://nationalzoo.si.edu/ConservationAndScience/SpotlightOnVetMedicine/pandahealth040628.cfm>)



EXTENDING REACH/ENHANCING MEANING

Behind digitization is the belief that the sharing of knowledge is a democratic ideal that should not be limited by geographic, cultural, or economic boundaries. Equal access to knowledge is an incalculable gift. It prompts moments of discovery and acts of creativity. It inspires quests and evokes wonder. And it satisfies humanity's insatiable curiosity and ceaseless inquiry about the "what," "how," and "why" of our world.

While the Smithsonian serves the nation, our influence is felt worldwide, and the exchange of information, objects, and expertise is fundamental to our mission. Throughout our history, we accomplished this by making the physical object available. Since the 1960s, the Smithsonian has been digitizing data about the objects we hold. As technology became available, we began creating digital images, audio recordings, video recordings, and research data. Today, we are at an important junction. Technology allows us to extend our reach in ways much broader than ever before, and gives us the means to increase our rate of digitization.

We know that digitization *enhances* physical access, allowing us to introduce cross-disciplinary, multidimensional, and even multisensory views, adding voices, sharing experiences, and ultimately, deepening meaning by online pairing of the object with its interpretive data. Before, during, and after a visit, digital information will heighten the allure of the real thing. And those who cannot come in person will have a digital experience of the Smithsonian's treasures.

Our collective past, as it resides within the Smithsonian, is physical; yet increasingly, the way we create and communicate is virtual. By following this plan, the Smithsonian can excel in both of these worlds.

PRESERVING ENDANGERED LANGUAGES.

Between 1912 and 1941, ethnologists recorded the languages, legends, and stories of 35 Native American tribes on wax cylinders and aluminum disks. Working with the Rosetta Project, an initiative that is building a digital library of human languages, the Smithsonian's National Anthropological Archives is digitizing this trove of historic sound recordings and making them available online for language revitalization and scholarly research. (http://www.nmnh.si.edu/naa/whatsnew2006_07.htm)



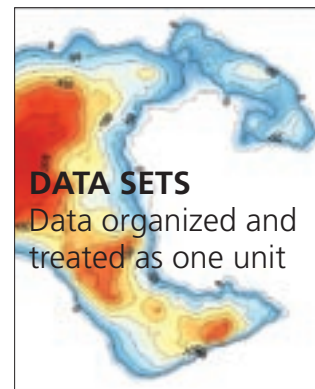
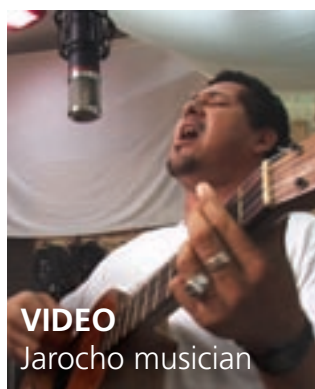
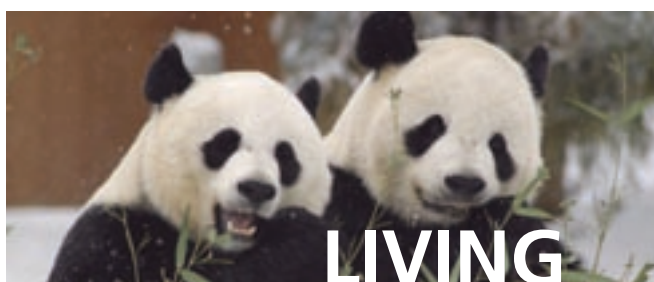
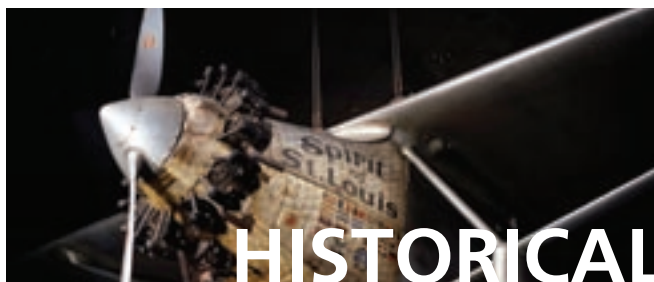
WHAT, EXACTLY, IS DIGITIZATION?

We use the term digitization to refer to a set of processes that convert physical resources to a digital form or that create materials — such as photos taken with a digital camera, or data collected by an electronic measuring device — in a digital format. We can then share these materials through digital devices, equipment, and networks. They form a new type of collection — a digital collection — that requires special care and preservation.

To avoid digitized materials becoming obsolete, we must digitize at the highest quality, migrate to the latest storage and formats, and maintain the links to the descriptive information that makes digital assets meaningful. The Smithsonian will take a life cycle-management approach to digitization based on carefully crafted standards and best practices that will ensure the highest fidelity and widest range of uses. We will keep a close eye on the changing technologies that the participatory web and new media world will surely bring. Equally important is establishing guidelines for disposing of data we no longer need to retain.

WHAT ARE WE DIGITIZING?

In addition to the objects and specimens themselves — whether born digitally or converted — the Smithsonian will digitize the research, descriptions, and interpretive information that places them in context and gives them meaning.



Credits this page: Left Column: Ghost glass frog (*Centrolene ilex*), Smithsonian Tropical Research Institute; *Sounds of Indian Summer*, Contemporary Native Music from the National Museum of the American Indian; Jarocho musician studio recording of Son de Madera, Smithsonian Center for Folklife and Cultural Heritage. Center Column: *Spirit of St. Louis*, National Air and Space Museum; Giant Pandas, National Zoological Park; *Ryder's House* by Edward Hopper, Smithsonian American Art Museum; Mosquito, Public Health Image Library. Right Column: Rare books, Smithsonian Institution Libraries; Handwritten Draft of James Smithson's Will, Smithsonian Institution Archives; Data from the Global Volcanism Program, National Museum of Natural History.

LAUNCHING A NEW ERA

Few initiatives we could undertake represent so great a service to research and education as digitization. The immensity of the task ahead is mitigated by benefits that will touch every aspect of the Smithsonian and each of our diverse audiences.

Broaden Access

Most people can't journey to the Smithsonian. Even when they can, space constraints let us display only minuscule percentages of our collections. Making more resources available digitally greatly increases public access, expedites the work of scholars and researchers worldwide, and opens new possibilities to educators in every setting. Objects relating to a given subject — Thomas Edison, Native American cultures, or the solar system, to name three — reside in multiple places. Digitizing entire collections will allow us to integrate our resources, making it possible for scholars working externally to see at a glance our depth and breadth of holdings in a given area. It will also allow us to share our resources more broadly by integrating collections that have been separated by geography and time across many cultural heritage institutions and research centers. Digitized materials will help us reach underserved audiences, as well as those not inclined to see museums as a source of information. Equally critical is enabling those inside the Smithsonian to work together across disciplines, museums, and centers. For the first time in nearly two centuries, we will be able to realize the full power of our collections.

BALANCING PROTECTION AND ACCESS.

A type specimen — the representative specimen of a newly described species — is a critical resource for botanists studying plant relationships. In the past, to consult a type specimen, researchers had to travel to the thing itself or seek its loan. The Smithsonian's Department of Botany, a pioneer in offering remote access to its collections, has worked since 2000 to digitally image the 100,000 specimens in its Type Register. Scientists can now view 85,000 types online, while the irreplaceable specimens themselves remain safe from excessive handling. (<http://botany.si.edu/types/>)



OBJECT-BASED LESSONS.

Helping the nation's schoolteachers revitalize education is a major Smithsonian goal. The Smithsonian's History Explorer project — a collaboration between the National Museum of American History and the Verizon Foundation — posts hundreds of free resources online, allowing users to "read" collection objects for the stories they tell about our nation and its peoples. (<http://historyexplorer.americanhistory.si.edu/>)



Preserve Collections

To preserve our collections, the Smithsonian constantly battles the destructive forces of time and environment. Despite our best efforts, plastics discolor, wax cylinder recordings distort, and botanical specimens become brittle. Digitization offers a way to make objects — and the valuable information they contain — available without jeopardizing their integrity by handling or by exposure to the elements. Digitization will help make Institutional activities such as conservation and loans from the collections easier, and assist us in leveraging staff skills, knowledge, and expertise more effectively across the Institution.

Support Education

Perhaps the most exciting impact of digitization will be felt in the nation's classrooms and everywhere learning takes place, both formally and informally. Imagine how the study of the American civil rights movement would come alive with instant access to the very voices, images, and diaries of America's young freedom fighters. How powerful it would be to give everyone interested in space travel the chance to tour the *Enterprise* without leaving home, offering new experiences not normally possible in the museum such as exploring the inside of the space shuttle in 3D. Educators working within the Smithsonian will be able to interact virtually with our audiences and cultivate forums for exploring topics in more depth and from varying perspectives. Lifelong learners will be able to guide their own learning with help from our collections. Digitization will give the public access to a much greater percentage of the Smithsonian's immense resources, providing better tools with which to spark learning.

Enrich Context

Sharing not only the object itself but also details, records, and other interpretative data associated with it makes for a richer interaction and enhances a user's understanding of the object's context and meaning. Digitization will facilitate the efforts of experts working remotely to compare their artifacts and specimens against those of the Smithsonian, enriching information about these holdings at a faster rate. Equally important, it creates the potential for people the world over to add impressions, associations, and stories to the permanent record.

A STRAIGHTFORWARD APPROACH

Creating a Digital Smithsonian, the plan to develop and implement a pan-Institutional approach to digitization, involves three main steps.

- Create, manage, and promote the digitized assets themselves.
- Shape a formal, ongoing digitization program.
- Secure resources to provide adequate funding over time and build staff capacity.

Digitization is more than simply the taking and posting of a single digital image. Just one record album might involve multiple images of the cover, a music video, and digital sound recordings, adding up to as many as 16 digital entries for one artifact. When we add information in our libraries and archives to the 137 million objects in

ENGAGING NEW

AUDIENCES. In a dramatic example of what can happen when Smithsonian resources meet up with social media's reach, the Institution's collaboration with Flickr Commons made a broad sampling of historic images from its museums, libraries, and archives available. And millions of views promptly resulted, engaging new audiences and teaching us what content they most desire. (<http://www.flickr.com/photos/smithsonian/>)



GRATEFUL SCHOLARS.

Often the most powerful arguments for digitization come from the users themselves. A Hawaiian researcher found an online volume of rare descriptions and illustrations of now-extinct birds on a Smithsonian site. "I live on the big island of Hawaii, a \$300 plane ride away from the Honolulu Bishop Museum and even when I can make it there, they do not have what I need. I have been looking for this text, (*Avifauna of Laysan and the Neighboring Islands*) for more than TWENTY YEARS. Mahalo nui loa for all of your hard work." (<http://bit.ly/41gxf>)



our collections — as well as information such as the National Zoo's records and research data on endangered species — the number of entries is considerably higher.

These millions of objects — and the data that supports them — are held by 19 museums, nine research centers, 20 libraries, a zoo, and many centers and programs. Past efforts to digitize were often driven by sporadic opportunities or immediate program needs, resulting in "random acts of digitization," with items captured in various formats using different technologies, some proprietary, others now obsolete. To avoid a digital Tower of Babel, we will create a unified program, driven by a comprehensive strategy that offers guidelines for what we do and do not digitize; clear policies and processes; and uniform standards.

Finally, we must carefully consider the terms that will help our audience both find objects and add meaning. Ask for soda and depending where you are in America, you might get sodium bicarbonate, seltzer, or a soft drink. A fourth-grader completing a homework assignment on the night sky might key in "star," whereas a post-doctoral fellow or scholar would use more specific and sophisticated terms. Judaica scholars might search the collections using Hebrew or English. If the science — and expense — of digitization rests with the technology, then much of the art relates to vocabulary. Language changes constantly, and as access broadens, the public will offer infinitely more descriptions per item.

ASSESSING COST AND TIMELINES

How long will digitization take? How much will it cost? Right now, we are not sure, and the plan's number-one task is to determine timelines, cost parameters, and guidelines for setting priorities about what will be digitized when. While we will not digitize all of our collections, the price tag is still daunting, especially considering that many of our objects are three-dimensional and therefore more difficult to digitize. Added to the direct cost of digitization are the staff hours needed to find and research objects and data and the rights associated with them.

Regardless of the specific digitization strategies we pursue, the investment will be enormous. This accounts for a key goal in the digitization plan: securing additional financial and human capital. As noted, digitization is an ongoing process that will require ongoing resources. We have been digitizing, and will continue to do so as funds become available, but from now on we will work across the Institution from a single plan that outlines a comprehensive and systemic approach.

Any consideration of cost is balanced by what we stand to gain by making our collections available 24/7. Digitization will also result in considerable savings relating to the preservation of our collections and reduced travel costs for scholars. And Smithsonian staff will be able to access documents and collections much more quickly.

FROM PIONEER TO LEADER

The technologies of digitization may be new, but the idea is not. In the 1960s, the Smithsonian showed tremendous foresight by digitizing cultural and biological specimens, which at that time meant entering cataloging information into a database. Other large museums followed suit, using software programs we had developed for recording data. Prompted by Congressional mandate in the late 1970s, we produced an automated inventory of our holdings, and over the last 30 years, we have taken advantage of new technologies to digitize information, images, and sounds. Still, none of these early efforts was comprehensive or uniform, and expectations of what is a quality digital product have greatly increased as technology has matured.

Recognizing the magnitude, challenges, and ultimately the importance of digitization, a steering committee was formed in 2009 to examine this issue. The committee's vision resulted in this document, *Creating a Digital Smithsonian*, a pan-Institutional strategic plan designed to enable cohesive and unified virtual access to the Institution's collections, research, educational materials, and exhibitions through digitization. The plan does not assume everything must be digitized. Rather, it outlines strategies for digitizing those resources essential to realizing the Institution's priorities.

ENHANCED EXPERIENCE.

Enlarged to many times its original size, the 12-cent S.S. *Adriatic* postage stamp shows off the sharpness of the engraver's art through the lines of the ship's rigging and the swell of the deep evergreen sea it sails on. The 1869 stamp is part of the National Postal Museum's digitized collection of certified plate proofs, which are rarely seen because of their susceptibility to light. Through digitization, philatelists can not only examine stamps that are normally not on display, but also can see details not normally apparent to the naked eye. (www.arago.si.edu)



In close touch with colleagues at the world's largest museums and archives, Smithsonian staff are well positioned to share best practices and take advantage of emerging knowledge around digitization. Our plan, which provides clear direction for creating and maintaining digital assets so that they are technology-independent and shareable, will position the Smithsonian as a leader in this important work.

A complementary project, the Smithsonian Web and New Media Strategy addresses how to use, place, and promote these digitized assets to maximize virtual outreach.

VIRTUAL ACCESS ENSURES RELEVANCE AND IMPACT

Factors within the Institution as well as in the external environment make this the perfect time to embark on this ambitious process of broadening virtual access to our holdings. Digitization is:

Integral. The Institution's recently released strategic plan, *Inspiring Generations Through Knowledge and Discovery*, cites broadening access, revitalizing education, and strengthening collections among its top priorities. Digitization is one of the single best ways to achieve these goals.

Interactive. By digitizing assets, we can meet the growing demand to interact and engage as well as share and inform. Social media are changing the shape of our largest institutions, and participatory is the new by-word for communications.

Integrative. A systematic, comprehensive plan to digitize resources and provide unified access to them greatly bolsters our efforts to become "one Smithsonian," a view that more closely aligns with the public perception.

And finally,

Imperative. With the second generation of digital natives coming to the fore, the world has moved irrevocably into the digital age, and we must move with it. We cannot fail to act promptly or give this responsibility any less than our full measure of attention. By capitalizing on the opportunities of digitization and thoughtfully addressing its challenges, we can ensure Americans unfettered access to their cultural, social, and scientific heritage for generations to come.

RECREATING THE PAST.

Sometimes, it's what you don't see that is important. The Freer Gallery of Art and the Arthur M. Sackler Gallery are digitizing rare fabrics that are used to frame, or mount, East Asian paintings and thus



are an essential part of art conservation. Since these historical fabrics are not available, digitized images allow weavers to reproduce them more efficiently on computerized looms. Images also allow conservators to verify colors and weave-structures and to share this information easily with researchers, curators, and other conservators.

INFINITE REACH

Digitization will help us draw multi-media resources from our science centers, programs, and museums and combine them in a way that transports you back in time to sit with a Kansas farm family in the 1930s, as they cluster around the radio listening to President Roosevelt deliver a fireside chat. Or it will let you experience the present as our scientists do — standing, say, with the Inuit in the frigid Arctic, learning their many indigenous words for ice. Perhaps, one day, you will even be able to travel virtually through space, with so clear a view that you feel as though you can touch the stars from your armchair.

With digital assets, we will truly have infinite reach.



SEEING INTO SPACE.

The Smithsonian Astrophysical Observatory operates the nation's premiere x-ray telescope, the Chandra X-ray Observatory, which orbits high above the Earth capturing critical information about the universe. Google Sky and social media sites such as Flickr use Chandra's digital images, and Smithsonian scientists tag and embed each image with important metadata — object type and descriptions, location, etc. — to help viewers appreciate and understand what they see. (www.chandra.si.edu)

Creating a Digital Smithsonian

Goals, Objectives, Action Steps

MISSION

To digitize the resources of the Institution for the widest possible use by current and future generations.

VALUES

Responsibility and Stewardship

We strive to be accountable, reliable, and responsible in caring for the National Collections and the resources that have been entrusted to us. We recognize that our reputation as a trustworthy institution in the digital environment rests on our ability to demonstrate the highest ethical standards, objectivity, and authenticity.

Service

We serve the American people and the world through education, research, interpretation, and stewardship of the National Collections. We will continue this service role in the digital realm.

Engagement

We engage the American people in dialogues about the social, cultural, and scientific issues of our time and of our past, in order to create and empower an informed citizenry that can interact knowledgeably in local, national, and world affairs today and in the future.

Democratic Ideals

We strive to make our activities inclusive, diverse, and accessible to all in order to encourage the multiple perspectives and viewpoints that are essential to greater understanding and knowledge.

Inspiration

We stimulate curiosity about nature and culture, inspiring people to learn, explore, and better understand their role and impact in this world. We want to stir passions that lead to creativity, innovation, and transformative experiences in both the physical and virtual realms.

Leadership

We aspire to be a leader in research, education, and collections care and interpretation, by pursuing state-of-the-art activities, technologies, and processes.

STRATEGIC GOALS

Three broad goals address content, infrastructure, and resources. While listed in priority order, the goals address issues that are interdependent, so we will implement them concurrently.

Goal 1: DIGITAL ASSETS

Provide unparalleled access to Smithsonian collections, research, and programs by creating, managing, and promoting the Institution's digital assets.

This goal seeks to increase the amount and availability of our digital assets, and introduce comprehensive and systematic digital asset management planning. To accomplish it, we must first assess existing digitized assets across the Institution and the technologies with which they were created. We then have to define criteria for selecting and prioritizing Smithsonian resources to digitize, because we will not have sufficient financial resources to meet the total demand. We must establish trusted digital repositories to preserve the assets once digitized, and then ensure that we can integrate them across the Smithsonian and into the broader online arena. Finally, we have to develop strategies for promoting greater use of our assets within the Institution and throughout the world.

OBJECTIVE 1

Protect and enhance the value of all Smithsonian digital assets through coordinated digital asset management.

- Identify existing digital assets — and assess methods used for creating and managing them — at the unit level.
- Establish selection criteria and priorities for digitizing Smithsonian resources.
- Develop requirements for life cycle-management of digital assets to ensure immediate access and long-term preservation.
- Build strategic partnerships for content development and management that protect public interest and access.
- Construct a Smithsonian common data model to facilitate exchange of information in-house and to provide a mechanism that enables broader use among many communities of practice.
- Document rights, restrictions, and security requirements for digital assets, in order to clarify access and use issues, identify what assets can be made readily available, and support our responsibilities as stewards of the collections.
- Empower staff and audiences to use the Smithsonian's digital resources by developing user-friendly methods and tools.

OBJECTIVE 2

Freely exchange Smithsonian digital assets, regardless of the systems in which these assets reside, by developing the necessary information technology infrastructure.

- Gain an accurate picture of the Smithsonian's technological landscape by surveying existing and planned systems that provide access to, or manage, digital assets and their metadata.
- Implement technical best practices and standards for capturing, creating, and using digital assets, and incorporate them into processes and systems.
- Assess the feasibility of shared facilities and develop centers of excellence within the Smithsonian for digitization of assets.
- Determine the infrastructure and Smithsonian-wide systems needed to build interoperable systems.
- Develop and implement a methodology for projecting future digital asset storage and backup requirements, to create sustainable, optimal storage architecture.
- Ensure that trusted digital repositories are available for digital assets requiring long-term preservation and access.

OBJECTIVE 3

Raise awareness and increase use of Smithsonian digital resources, both within and outside the Institution.

- Create Institution-wide digital marketing expertise, and foster broad participation in promoting digital assets.
- Use multiple web and new media venues to increase awareness of the value of the Smithsonian's digital resources.
- Form strategic partnerships and relationships to promote, leverage, and develop Smithsonian digital assets.
- Increase the Smithsonian community's awareness of the availability of Institutional digital resources, through the use of multiple internal communication venues.

Goal 2: DIGITIZATION PROGRAM

To pursue its mission in the 21st century, integrate digitization into the core functions of the Smithsonian.

We will move digitization from an activity handled differently in each museum and center to an integrated Smithsonian digitization program that meets both internal needs and external expectations. This requires us to formulate Institutional policy to guide digitization activities, outline program expectations, and provide a basis for consistent decision-making that aligns with other relevant Smithsonian and federal policies. A pan-Institutional Digitization Program will develop and oversee ongoing digitization strategies in conjunction with Smithsonian units. These and other efforts will create an Institutional culture that embraces digitization and the sharing of collections, research, and expertise.

OBJECTIVE 1

Create a pan-Institutional policy to guide the Institution in its digitization activities.

- Analyze existing Smithsonian policies and guidelines, and identify elements of a pan-Institutional digitization policy.
- Develop criteria for determining when an activity should be performed at the unit level and when it should be performed centrally.
- Formulate a Smithsonian policy statement on digitization that sets forth Institution-wide principles and unit guidelines.

OBJECTIVE 2

Establish a Smithsonian Digitization Program to implement the Strategic Plan and coordinate Plan activities with other ongoing Institutional planning efforts.

- Identify existing or new organizational structures, roles, and responsibilities for administering the Smithsonian's Digitization Program.
- Assign and refine roles and responsibilities for implementing, managing, monitoring, evaluating, and revising the Digitization Strategic Plan.

OBJECTIVE 3

Cultivate an internal culture that embraces digitization and sharing of Smithsonian collections, research, and expertise.

- Develop a virtual portal for the exchange of information and knowledge about digitization at the Smithsonian.
- Provide equitable access across the Smithsonian to the tools and means for digitization.
- Establish rewards and incentives for collaboration and ingenuity in digital activities.

PRESERVING COLLECTIONS.

Digitization not only broadens access, sometimes it ensures it. Natural History's collections of frog vocalizations — many of species now extinct — are recorded on tape that has reached the end of its usefulness. And the original ledger books of Spencer Fullerton Baird, the Smithsonian's second Secretary and one of America's most famous ornithologists, are too fragile to be handled. Digitization preserves both the items and the information contained in them for future generations.



Goal 3: ORGANIZATIONAL CAPACITY

Through novel, innovative approaches, secure sufficient resources and build capacity to create and sustain a digital Smithsonian.

A project of this magnitude requires significant financial and human resources. To ensure that we have sufficient funds to sustain the Smithsonian's Digitization Program over time, we will integrate digitization into Smithsonian program and project business plans; develop Institutional guidelines for partnerships and sponsorships; and identify alternative sources and mechanisms of support. We will offer training and tools to enhance staff competencies, and supplement their efforts with the knowledge and skills offered by colleagues in related organizations engaged in similar work.

OBJECTIVE 1

Establish business goals and implement business strategies that support a digital Smithsonian.

- Develop a business plan for digitization to support the rationales for digitization initiatives.
- Establish guidelines and develop templates for digitization sponsorships and partnerships.
- Identify and seek assistance from multiple mechanisms and sources to support the Smithsonian Digitization Strategic Plan.

ADDING EVERYDAY

VOICES. Anyone who doubts the power — or importance — of individual voices in history need only look to the digital archives of the National Museum of American History's commemorative exhibition



"September 11: Bearing Witness to History." On view at the museum from September 11, 2002 to July 6, 2003, the exhibition collected stories of visitors who talked about how their lives were forever changed. The digital archive is a joint project of the Smithsonian, the Center for History and New Media at George Mason University, and the American Social History Project at the City University of New York Graduate Center. (<http://911digitalarchive.org/smithsonian/>)

OBJECTIVE 2

Create organizational capability to efficiently implement the Smithsonian Digitization Program.

- Identify positions in each Smithsonian unit that contribute toward the implementation of a robust digitization program, and ensure they have the appropriate skills, tools, and understanding of their roles to meet program goals.
- Identify and develop ways to supplement the employee workforce with other sources of paid or unpaid assistance, such as students, volunteers, teachers, or research fellows.

Appendix A: Digitization Strategic Plan Committee Charter

BACKGROUND

In August 2006, a Digitization Steering Committee was formed to initiate a pan-Institutional discussion on digitization, which drew on the collective knowledge and experience of the Smithsonian staff. Digitization is crucial to the Smithsonian's future, because of its role in both preserving and providing public access to the national collections and its own research. Those who participated in that initial discussion concluded that it is imperative that the Smithsonian develop a pan-Institutional approach to the digitization of its research and collections assets. Several recommendations were made to achieve that goal.

One of the recommendations was to develop a pan-Institutional digitization strategic plan. In response to that recommendation, the Smithsonian Institution Digitization Strategic Plan Committee (SI-DigiSPC) was formed, with a membership representing the Institution across units and disciplines.

PURPOSE

The Smithsonian Institution Digitization Strategic Plan Committee was charged by the Secretary with developing the Smithsonian's pan-Institutional Digitization Strategic Plan, which was delivered in fall 2009. The plan included the Institution's Digitization Program mission statement; vision for the future; and high-level goals, objectives, measures, priorities, guidelines, and timeframes for creating, preserving, and managing the Institution's digital assets and for making these assets accessible to worldwide audiences.

COMMITTEE ACTIVITIES

- Develop the mission, vision, and goals for the Smithsonian's Digitization Program and the high-level objectives, strategies, and measures for each goal area, recommending the office or unit which should be responsible for each pan-Institutional objective.
- Establish priorities for the pan-Institutional goals/objectives.
- Recommend a future organizational framework to implement and monitor the Institution's Digitization Strategic Plan.
- Establish guidelines for the development and implementation of individual unit digitization strategic plans, in response to the Institutional Digitization Strategic Plan.
- Identify where digitization-related standards are needed, at the Institution level and at the unit level.

Appendix B: Smithsonian Digitization Strategic Plan Committee

Carol Butler, *Chief of Collections and Registrar,
National Museum of Natural History*

Giuseppina Fabbiano, *Senior Astrophysicist;
Head, Data Systems Division, Chandra X-Ray Center,
Smithsonian Astrophysical Observatory*

James B. Gardner, *Senior Scholar, National Museum of
American History*

Martin Kalfatovic, *Assistant Director, Digital Services
Division, Smithsonian Institution Libraries*

Matt McDermott, *Assistant Director for Information Technology,
National Museum of Natural History*

Ann McMullen, *Head of Collections Research and Documentation,
National Museum of the American Indian*

Carole Neves, *Director, Office of Policy and Analysis*

Nancy Proctor, *Head of New Media Initiatives,
Smithsonian American Art Museum*

Michelle K. Smith, *Director, Publications & Electronic Media, Smithsonian Center for Education and Museum Studies*
 Pamela C. Smith, *Special Assistant for IT Strategic Planning, Office of the Chief Information Officer*
 Katherine P. Spiess, *Director, Digitization Program Office, Office of the Chief Information Officer*
 Mary Tanner, *Deputy Director, National Zoological Park*
 Bill Tompkins, *National Collections Coordinator, National Collections Program*
 James T. Ulak, *Deputy Director, Freer Gallery of Art and the Arthur M. Sackler Gallery*
 Anne Van Camp, *Director, Smithsonian Institution Archives*
 Diane M. Zorich, *Consultant and Facilitator*

Appendix C: Acknowledgements

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Dr. Daniel J. Cohen, *Associate Professor, Department of History and Art History, Director of the Center for History and New Media, George Mason University*
 Dr. Chris L. Greer, *Director, National Coordination Office, Networking and Information Technology Research and Development (NITRD)*
 Karen Huffman, *Senior Applications & Database Administrator, Information Systems & Technology, National Geographic Society*

Andy Lawrence, *Regius Professor of Astronomy, Institute for Astronomy, Royal Observatory, University of Edinburgh*
 Dr. Clifford Lynch, *Executive Director, Coalition for Networked Information*
 Kevin Novak, *Vice President, Integrated Web Strategy and CIO, American Institute of Architects; Chair, Electronic Government Group, World Wide Web Consortium (W3C)*
 Dylan F. Tweney, *Senior Editor, Wired.com*
 Günter Waibel, *Program Officer, OCLC Research*
 Joan Weinstein, *Associate Director, The Getty Foundation*

PHOTO CREDITS

Cover image: Smithsonian Castle photo mosaic. **Page 2:** An ultrasound image of National Zoological Park panda Mei Xiang's abdomen, Smithsonian National Zoological Park. **Page 3:** Chief Juan Soletó Calac [Luiseño] dressed in ceremonial costume described by Fr. Boscana as 'Tobet' (plus modern overalls), *photograph by J.P. Harrington, 1933*, National Anthropological Archives, National Museum of Natural History. **Page 4: Left Column:** The ghost glass frog (*Centrolene ilex*), *photo by Cesar Jaramillo*, Smithsonian Tropical Research Institute. *Sounds of Indian Summer: Contemporary Native Music from the National Museum of the American Indian*. Studio recording of Son de Madera, Jarocho musician Tereso Vega playing jarana in a Xalapa, Mexico studio, Smithsonian Center for Folklife & Cultural Heritage, *video still from Charlie Weber*. **Page 4: Center Column:** Ryan NYP *Spirit of St. Louis*, the aircraft flown by Charles Lindbergh solo across the Atlantic in 1927, *photo by Eric Long*, National Air and Space Museum. Giant Pandas, National Zoological Park, *photo by Ann Batdorf*. *Ryder's House*, by Edward Hopper, 1933, Smithsonian American Art Museum. *Ochlerotatus triseriatus*, known as the eastern treehole mosquito, *photo by James Gathany*, Public Health Image Library, Center for

Disease Control and Prevention. **Page 4: Right Column:** Rose-throated Becard and gray-collared Becard, Spencer Fullerton Baird, *The Birds of North America*, 1860, Smithsonian Institution Libraries. Handwritten draft of James Smithson's will, Smithsonian Institution Archives. Bathymetric map of Rinjani's Segara Anak lake made from 65 km of echo-sounder surveys conducted in 2007 and 2008, *Courtesy of the CVGHM, ULB, and FUNDP study team*, Global Volcanism Program, National Museum of Natural History. **Page 5: Left:** Record from the Type Specimen Register, United States National Herbarium, *Asimina longifolia* var. *spatulata*, Kral, R., *Brittonia* 12:266, 1960 - Isotype (*Annonaceae*), Department of Botany, National Museum of Natural History. **Right:** The *History Explorer* project logo, National Museum of American History, <http://historyexplorer.americanhistory.si.edu/>. **Page 6: Left:** The Smithsonian Institution's Flickr photostream homepage <http://www.flickr.com/photos/smithsonian>. **Right:** Walter Rothschild, *The Avifauna of Laysan and the neighbouring islands with a complete history to date of the birds of the Hawaiian possession*; London: R.H. Porter, 1893–1900, Smithsonian Institution Libraries. **Page 7:** The 12-cent S.S. *Adriatic* postage stamp. *Arago*, National Postal Museum. **Page 8:** Fabrics that are part of the frame, or mounting, of East Asian paintings. Courtesy of the Freer Gallery of Art and the Arthur M. Sackler Gallery. **Page 9:** Composite of data from NASA's Chandra X-ray Observatory and Hubble Space Telescope is a new look for NGC 6543, better known as the Cat's Eye nebula. Credit: X-ray: NASA/CXC/SAO; Optical: NASA/STScI. **Page 12:** Cassin's Kingbird (*Tyrannus vociferans*), Spencer Fullerton Baird, *The birds of North America*, 1860, Smithsonian Institution Libraries. **Page 13:** Photo taken from the World Financial Center South Bridge on October 19, 2001. <http://911digitalarchive.org>.

Appendix D: Digitization Strategic Plan Working Group Members

GOAL: Digital Assets —

Digital Asset Management Planning

David J. Holbert, *Imaging Specialist, Production Manager, Smithsonian Institution Libraries*
 Robin Holladay, *Archives Technician, Archives of American Art*
 Martin Kalfatovic, *Head, New Media Office, Smithsonian Institution Libraries*
 Kara Lewis, *Collections Information Program Manager, National Museum of the American Indian*
 Arnold H. Rots, *Archive Astrophysicist, Smithsonian Astrophysical Observatory*
 Rebecca Snyder, *Digital Media Specialist, National Museum of Natural History*
 Beth Stern, *Senior Data Architect, Office of the Chief Information Officer*
 Anne Van Camp, *Director, Smithsonian Institution Archives*

GOAL: Digital Assets —

Information Technology Infrastructure

Alberto Accomazzi, *Project Manager, NASA Astrophysics Data System, Smithsonian Astrophysical Observatory*
 Robert A. Craddock, *Geologist, National Air and Space Museum*
 Alicia Cutler, *Manager, Digital Asset Management & Preservation Program, National Museum of American History*
 Kate Diggle, *Collections Database Administrator, National Postal Museum*
 Riccardo Ferrante, *IT Archivist & Electronic Records Program Director, Smithsonian Institution Archives*
 Matt McDermott, *Assistant Director for Information Technology, National Museum of Natural History*
 Isabel Meyer, *DAMS Project Manager, Office of the Chief Information Officer*
 Ken Rahaim, *Systems Analyst, Office of Systems Modernization, DAMS Branch, Office of the Chief Information Officer*
 Pete Reiniger, *Sound Production Supervisor & Special Projects Manager, Smithsonian Folkways Recordings*
 Pamela C. Smith, *Special Assistant for IT Strategic Planning, Office of the Chief Information Officer*
 Beth Ziebarth, *Accessibility Planning Manager, Accessibility Program*

GOAL: Digital Assets —

Raise Awareness & Increase Use

Kimberly Arcand, *Media Production Coordinator,*
Smithsonian Astrophysical Observatory
Laura Baptiste, *Public Affairs Officer,*
Smithsonian American Art Museum
Lyz Bridgforth, *Advertising Coordinator,*
Freer Gallery of Art and Arthur M. Sackler Gallery
Tom Ott, *President, Smithsonian Enterprises and Director,*
Smithsonian Media
Caroline Payson, *Education Director,*
Cooper-Hewitt, National Design Museum
Nancy Proctor, *Head of New Media Initiatives,*
Smithsonian American Art Museum
Rusty Russell, *Collections Manager, US National Herbarium,*
National Museum of Natural History
Michelle K. Smith, *Director, Publications & Electronic Media,*
Smithsonian Center for Education and Museum Studies

**GOAL: Digitization Program —
Policy & Program**

Carol R. Butler, *Chief of Collections & Registrar,*
National Museum of Natural History
Giuseppina Fabbiano, *Senior Astrophysicist,*
Smithsonian Astrophysical Observatory
James B. Gardner, *Senior Scholar,*
National Museum of American History
Lauryn H. Guttenplan, *Associate General Counsel,*
Office of the General Counsel
Eleanor J. Harvey, *Chief Curator, Smithsonian American*
Art Museum
Robert Leopold, *Director, National Anthropological Archives,*
National Museum of Natural History
Andrew Pekarik, *Program Analyst, Office of Policy & Analysis*
Martin E. Sullivan, *Director, National Portrait Gallery*
Bill Tompkins, *National Collections Coordinator,*
National Collections Program

**GOAL: Digitization Program —
Cultivate Internal Culture**

Mike Edson, *Director of Web and New Media Strategy,*
Office of the Chief Information Officer
Martin Elvis, *Senior Astrophysicist, Smithsonian*
Astrophysical Observatory
Donald E. Moore, *Associate Director/Animal Care,*
National Zoological Park
Cynthia Parr, *Director of the Species Pages Group,*
Encyclopedia of Life
Suzanne C. Pilsk, *Cataloger, Smithsonian Institution Libraries*
Carlene E. Stephens, *Curator, Division of Work and Industry,*
National Museum of American History
Andrea Stevens, *Director of Strategic Communications,*
Smithsonian Institution Traveling Exhibition Service
James T. Ulak, *Deputy Director, Freer Gallery of Art and*
the Arthur M. Sackler Gallery

**GOAL: Organization Capacity —
Business Goals & Strategies and
Organizational Capability**

David K. Allison, *Associate Director for Curatorial Affairs,*
National Museum of American History
Lisa Barnett, *Director of Development, Smithsonian Tropical*
Research Institute
Carol Fiertz, *Chief, Outreach Technologies,*
National Museum of Natural History
Carole Neves, *Director, Office of Policy and Analysis*
Pete Pagano, *Government Relations Officer,*
Office of Government Relations
Amanda Preston, *Advancement & External Affairs Officer,*
Smithsonian Astrophysical Observatory
Mary Tanner, *Deputy Director, National Zoological Park*
George Thomas, *Senior Analyst, Office of Planning,*
Management & Budget
Marion K. Wright, *Manager, Business Partner Branch,*
Office of Human Resources



Smithsonian Institution

Smithsonian Information
SI Building, Room 153
MRC 010, P.O. Box 37012
Washington, D.C. 20013-7012
Phone: (202) 633-1000
E-mail: info@si.edu
Web: www.smithsonian.org