

# CREATING A DIGITAL SMITHSONIAN



EXECUTIVE SUMMARY: DIGITIZATION STRATEGIC PLAN



Smithsonian Institution

*Fiscal Years 2010–2015*

## Introduction

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.

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. 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.

### MISSION

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

### VALUES

**Inspiration:** Stimulate curiosity and stir passions that lead to creativity, innovation, and transformative experiences in both the physical and virtual realms

**Democratic Ideals:** Strive to make our activities inclusive, diverse, and accessible to all, embracing the multiple perspectives and viewpoints essential to greater understanding and knowledge

**Engagement:** Engage in dialogues about the social, cultural, and scientific issues of our time and of our past, to create and empower an informed citizenry

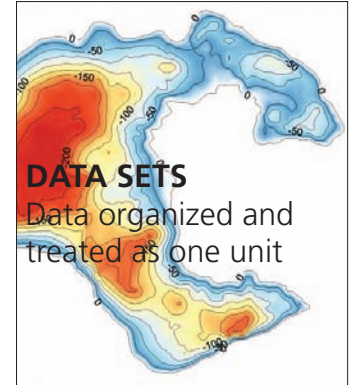
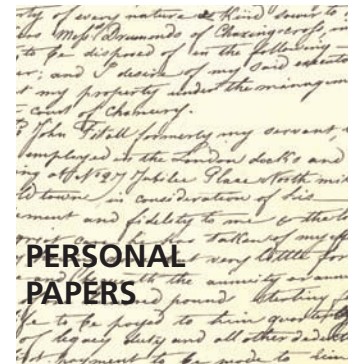
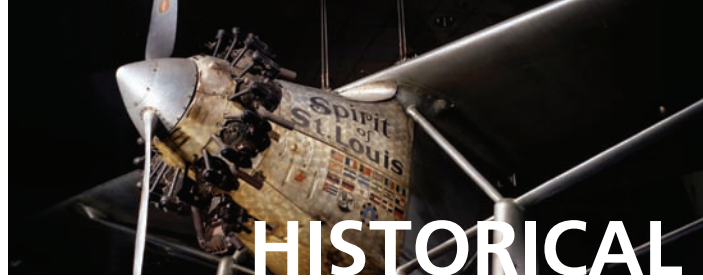
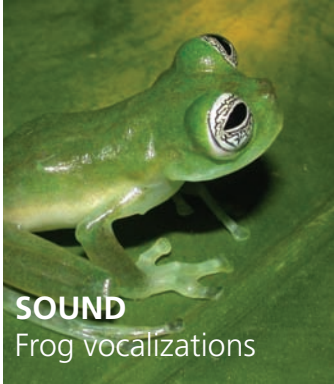
**Service:** Serve the American people and the world in the digital realm through education, research, interpretation, and stewardship of the National Collections

**Leadership:** Aspire to be a leader in research, education, and collections care and interpretation, by pursuing state-of-the-art activities, technologies, and processes

**Responsibility and Stewardship:** Our reputation as a trustworthy institution in the digital realm rests on our ability to demonstrate the highest ethical standards, objectivity, and authenticity

## 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.

## A Strategic Opportunity

Few initiatives we could undertake represent so great a service to research and education as digitization.

**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.

**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.

**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/>)



## An Excellent Investment

The magnitude of the task ahead is mitigated by benefits that will touch every aspect of the Smithsonian and each of our diverse audiences.

### BROADENING 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.

### PRESERVING 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.

### 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.

### SUPPORTING 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 space shuttle *Enterprise* without leaving home. 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.

### ENRICHING 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 and to collaborate in enriching the 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.

## 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.

**ADDING 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/>)



# 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 along with the maturing of technology.

In close touch with colleagues at the world's largest museums, libraries, 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 PAN-INSTITUTIONAL APPROACH TO DIGITIZATION

Recognizing that digitization is not a one-time project, a steering committee examined this issue, and their vision resulted in *Creating a Digital Smithsonian*, a pan-Institutional plan to enable digital access to the Institution's collections, research, educational materials, and exhibitions. The plan outlines strategies for digitizing those resources essential to realizing the Institution's priorities, and its approach 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.

## MEASURING PERFORMANCE

Performance measurement is critical to sustaining the highest standards of excellence and is essential for clearly communicating our accomplishments to external audiences. We will engage all levels of leadership in matching outcomes, goals, objectives, and strategies to performance indicators that will specifically and annually measure progress toward our goals. Indicators will be transparent and updated regularly.

## RESOURCING THE PLAN

The immensity of the task ahead is mitigated by benefits that will touch every aspect of the Smithsonian and each of our diverse audiences at a scale not done before by the Smithsonian. 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 and research, 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. Yet 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.

**SHARING 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> )



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