San Diego Redlining Map
A 1935 redlining map of San Diego, showing areas ranked from red (D), worst, to yellow (C), blue (B), and green (A) for the best areas such as Mission Hills, A-7. The most restrictive lending practices were applied in redlined areas such as Barrio Logan, around D-4, described in associated Federal documents as characterized by "detrimental influences, undesirable population or infiltration of it." Map: NARA.

PRESERVING HISTORY ON A HUMANITIES GRID FOR THE UNIVERSITY OF CALIFORNIA

SDSC data grid technologies help bring California's redlining history to life and preserve it for future generations

by Paul Tooby

Almost everyone knows the term "redlining"—the practice of denying loans or insurance to people based on the neighborhood they live in. Most people have come to believe that redlining stemmed only from individual bias, when in fact it was a Federal program of residential planning begun in the 1930s that produced neighborhood-level "redlined maps" which remained in use for almost four decades.

For other than a few well-researched cities, the bulk of the collection of once-confidential redlining files from the Federal Home Owners' Loan Corporation has remained invisible, tucked away on the shelves of the National Archives in Washington, D.C. and effectively out of reach for all but a few specialists—preventing wider understanding of this chapter of our nation's history.

Now, a unique collaboration among computer scientists at the San Diego Supercomputer Center (SDSC) at UC San Diego, and historians, social scientists, and others at UC Irvine and other campuses is bringing California's history of redlining to life, placing this collection online in digital form for eight California cities.

"Bringing this historical collection into the Information Age will dramatically broaden access," said Richard Marciano, director of SDSC's Sustainable Archives and Library Technologies Lab, who initiated the project. "Not only professional historians but also students, community groups, and planning agencies will easily be able to explore this little-known information."

The collection includes Federal redlining maps along with other documents from the 1930s and 40s such as interviews, financial and banking documents, and detailed city surveys from the National Archives, which Marciano and SDSC digital preservation specialist Chien-Yi Hou have painstakingly assembled and brought into digital form.

The project, the Testbed for the Redlining Archives of California's Exclusionary Spaces (T-RACES), will be one of the first to make use of a new "humanities grid." The HASS (Humanities, Arts, and Social Sciences) Grid, a cyberinfrastructure initiative organized by the University of California Humanities Research Institute (UCHRI) and partners, is bringing the benefits of advanced information technologies normally found only in science and engineering to these new communities across all ten University of California campuses.

The HASS Grid will store and make available the redlining collection using SDSC-developed data grid infrastructure that provides a central catalog to manage the preservation information for each city's electronic file of neighborhoods. In addition, the infrastructure will make the redlining documents accessible alongside a rich array of relevant information drawn from census tract data, municipal ordinances, and insurance protocols, allowing researchers to ask broader questions about the context, origins, and legacy of redlining.

"The importance of the HASS Grid is that for the first time it will give these communities a practical path to large, dynamic digital archives for their research, opening up entirely new avenues of investigation for these fields," said David Goldberg, director of UCHRI and a professor of Comparative Literature and Criminology, Law and Society at UC Irvine. "We're demonstrating the creative and innovative work that becomes possible at the interface of HASS content and high-end digital technology—for example, in the redlining project nothing like these overlapping data exist on the history of urban segregation for California cities."

Beyond simple access to information, the HASS Grid will also put a range of advanced data grid technologies at researchers' fingertips, helping them ask new questions and "connect the dots," collaborate, publish results online, and preserve collections for long-term use (see sidebar).

PRESERVATION DATA GRIDS MEET THE HUMANITIES

The UCHRI HASS (Humanities, Arts and Social Sciences) Grid is bringing "data cyberinfrastructure" tools typically found in the sciences to the humanities, arts, and social sciences communities. SDSC, a world leader in data management and digital preservation, is providing the advanced technologies to build the grid, starting with "grid bricks"—special storage computers equipped with advanced data grid software—for all 10 UC campuses, connected by high-performance networks. The principal cyberinfrastructure is the SDSC Storage Resource Broker (SRB) and in the future the advanced Integrated Rule-Oriented Data System (iRODS). These systems offer researchers an end-to-end environment that helps them assemble and store collections of digital artifacts, which can be highly heterogeneous, ranging from texts to scans of maps and films, audio interviews, and other formats. Users can collaborate and share data and tools in coordinated problem-solving with a limited set of colleagues or globally, and access tools to integrate multiple different data collections and analyze them with resources such as mapping and georeferencing software for exploring spatial questions. The comprehensive system also allows researchers to publish data and results in a digital library and finally provides sophisticated preservation capabilities to ensure that valuable historical resources and new knowledge created from them will remain available for future generations.

Tracing Redlining's Legacy

What can you do with historical data in digital form? Suppose a researcher wants to investigate whether historical redlining is still affecting where people live and their economic opportunities.

To answer these questions, Millicent Cox, a San Diego economist and demographer, used the digital redlining maps in conjunction with census data from 1990 and 2000 to analyze two San Diego neighborhoods. The Mission Hills neighborhood (A-7 on the San Diego map) was rated "A" on the Federal redlining maps, where the most favorable home loans were encouraged, and the Logan Heights neighborhood (D-4 and nearby on the San Diego map) was rated the lowest level, "D" where policies made it more difficult for residents to obtain home loans.

What Cox found in the recent census data is that the Mission Hills neighborhood still remains above the 95th percentile in San Diego County in median home value, and in the 99th percentile for population classified as white, even decades after the discriminatory redlining policies were no longer allowed. In contrast, the poorer Logan Heights "redlined" neighborhood remains below the fifth percentile in home value, with only three percent of the population classified as white, and less than one quarter the rate of home ownership.

"We found that the effects of redlining may extend beyond housing," explained Cox. "In areas like Barrio Logan, even years after official redlining ended, elementary school expectations and scores typically remain low, and redlining's impact on housing values could also play a role in determining educational opportunities by limiting residents' financial resources to afford college."

Other projects are beginning to make use of the new HASS Grid, including a collection of oral histories and other documents from World War II, and a project involving collections of maps relating to the origins of the arts of navigation in Portugal and their transmission throughout the Atlantic World in the early modern period.

Building Bridges

In addition to helping these projects, such early uses of the HASS Grid will have the added benefit of demonstrating the use of grid-based repositories for humanities data, encouraging wider adoption of these powerful new tools in HASS research.

"Our collaboration is helping the computing and humanities communities understand each other's approaches and problems," said Suzy Beemer, UCHRI associate director, Research Development. "We're showing, see, this can be done, you can cross the boundaries and do something new and valuable." To help more HASS researchers learn about cyberinfrastructure, the SDSC and UCHRI researchers have also supported the CI-HASS Summer Institute for the past two summers.

"We're learning that SDSC's work to help the HASS community discover new avenues of technology-enabled research can also come back to help the technical community develop better cyberinfrastructure," said Marciano. "We're finding that you always benefit when you get to know other communities."

The T-RACES project is supported by a grant from the Institute of Museum and Library Services (IMLS), and the HASS Grid is funded by the IMLS, the L.A. Jewish Community Foundation, Sun Microsystems, SDSC, and other sources.

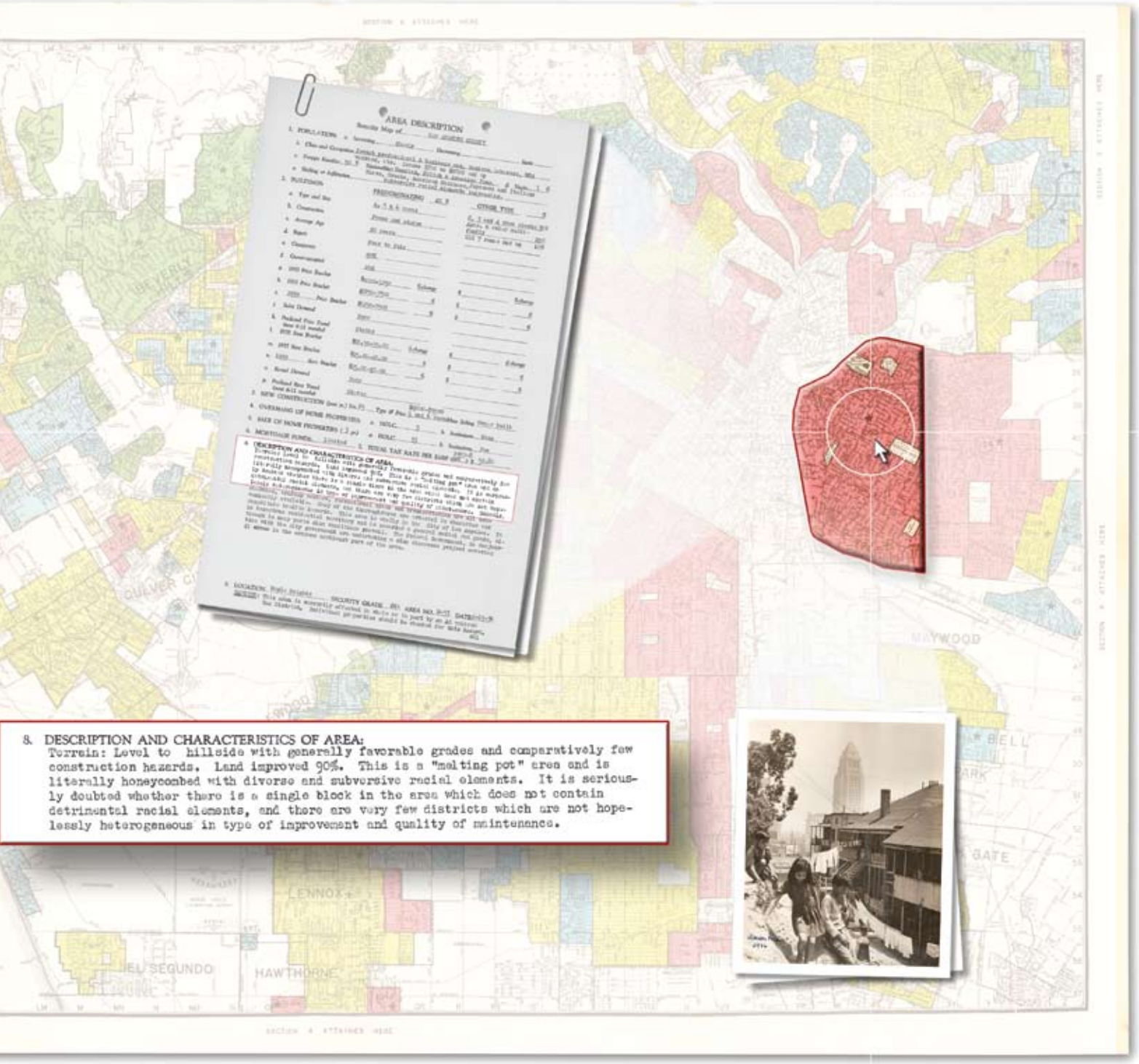
Project Participants

David Theo Goldberg and Suzy Beemer, UCHRI; Richard Marciano and Chien-Yi Hou, SDSC/UCSD; and Millicent Cox, MillicentCox LLC

Related Links

University of California Humanities Research Institute (UCHRI) http://www.uchri.org/

Testbed for the Redlining Archives of California's Exclusionary Spaces
http://salt.sdsc.edu/T-RACES/index.htm



Urban History of Los Angeles
This 1939 redlining map of Los Angeles shows the expanses of the lowest-rated "redlined" areas for minorities where housing loans were difficult to obtain. The T-RACES project is using the HASS Grid, based on SDSC data grid technologies, to provide researchers and the public easy access to this rich historical information. For example, for Boyle Heights (D-53) the map will link users to geographically associated documents including the government-prepared "Area Description," photographs, and more. Map and Area Description: NARA. Photo: Marion Palfi, UCLA Library Special Collections.