Antique Maps for the Twenty-First Century

BY JANET MENDELSOHN

Using cutting-edge technology, Historic MapWorks makes maps and charts from the earliest years of our country available to anyone with web access.

CHARLES CARPENTER can turn your computer into a time machine. All it takes is an address or the latitude and longitude of your house, your great-grandfather’s farm, or the local boatyard. On his company’s web site, www.historicmapworks.com, type the location into the search box and presto! Links appear to a multitude of maps, some 250 years old. Enter the address of this magazine (43 Mechanic Street, Camden) to find maps showing the streets of Camden in 1869, 1873, and 1884. Other searches bring up bird’s eye views of towns or charts, including some accented with illustrations of nineteenth-century ships.

Historic MapWorks, of Westbrook, Maine, used cutting-edge technology to turn Carpenter’s vast personal collection of antique maps into a state-of-the-art, multifunctional research tool. Founded in 2005, this marriage of past and present has already produced more than 150,000 images, a computerized collection that Carpenter says forms the world’s first electronic database of searchable maps of nineteenth and early twentieth century America.

To Charles Carpenter (right, above), antique maps, charts, and atlases are more than pretty visual objects—they are time lines in the development of our country.
In the company’s Westbrook headquarters, previously the offices of Portland Glass, hundreds of years converge. There are glass divider walls and contemporary cubicles with computer desks, giant flat-bed scanners, and high-speed printers that use archival inks that should last 100 years. A staff of 15 computer programmers, researchers, sales reps, and technicians works surrounded by art deco floor lamps and handsome old maps of Casco Bay and points west. Masters of high-tech wizardry, they restore centuries-old pages carefully detached from aged atlases that rest in stacks on tables in each room. Brown-tinted sheets of paper fill the heavy volumes that are bound in gold-tooled brown, russet, and black leather. Most of the atlases contain cadastral maps that show boundaries and ownership of land. They document the history of America’s westward expansion. Many were unearthed in barns, attics, bookshops, and dusty closets in county offices out west or in southern states, as well as in New England.

On a bright, cloudless day, when sunlight threatens to fade the fragile old pages, HMWM staffers pull down the shades and dim the lights. Everyone seems to have a particular interest in the work at hand. Who can blame them when the product of their labor is the restoration of these beautiful old maps? Here are maps of Atlantic City, before and after casino construction; three maps depict the Boston Fens as mostly swampland, then as a planned neighborhood, and then with construction underway for Fenway Park. HistomapWorks is a lucrative labor of love for Carpenter, a mustached entrepreneur with a PhD in microbiology and a passion for historical maps and rare books. That passion has led him to amass what he says is the premier private cadastral map collection in the world.

After living in five states, from Alaska to New York, he arrived in Maine to work at Indexx Laboratories in Westbrook, the international developer of technology-based products. "It’s a passion for medicine and food and water safety, where he still is employed as a longtime research fellow. He holds 18 patents in biochemistry and for medical devices. Growing this business seems to come naturally to Carpenter, who thinks big where others think small. A few years ago, he challenged himself to rebuild his 41-foot Morgan sailboat, Texas, after it sank in a hurricane. He built a custom interior, and all exterior hatches and trim; installed a new engine and systems; and re-rigged the boat, all before learning to sail. Today, he runs the 99-ton vessel over a three-year span, beginning in 2001, to Bermuda, Haiti, Cuba, Miami, and up the coast to Atlantic City, New York, and back home to Portland.

Carpenter can be a difficult man to read. When we spoke, he was reserved, barely smiling even as he intently described the enthusiasm that drive his life photography, bioarchitectural research, raising money to build playgrounds for children in Haiti and Afghanistan, and amassing a vast library on the history of science that includes fifteenth-century incunabula (books printed before 1500) and writings of Galileo. Some day, he said, he will donate his map collection to the University of Southern Maine’s Osher Map Library. Late last year, HMWM signed an exclusive commercial agreement with the library, adding 2,000 of the library’s antiquarian maps dating from the 15th century to HMWM’s resources.

Matthew Edney, Osher Professor in the History of Cartography at USM, said county maps and atlases are the single best point of access into the geographical intersection of American society, land ownership, agriculture, and industry in the 1800s. "The nineteenth century was a period of intense urbanization, industrialization, and the "Gilded Age," said Edney. "These maps and atlases cover much of the country, and many areas were remapped twice or even three times, so these maps can provide a firm basis for long-term studies. They often provide a wealth of information about historic architecture and local social organization, and they are a genealogist’s delight. Carpenter’s collection of these crucial iconoclastic documents is almost certainly the most extensive in private hands, and perhaps the largest outside of the Library of Congress. The gift of the collection to the Osher Map Library would be a truly significant addition to the cultural resources of USM and the people of Maine."

Indeed, HistomapWorks’s web site is a cartographer’s candy store with treats for those who study family history as well as for urban planners, historians, environmentalists, and you and me. Watercolor paintings to record property owners’ names, lot sizes, and area buildings. Later, the maps they created were hand-painted in watercolor by women who were paid one dollar a day to work at home. For additional fees as high as $100, homeowners could have a sketch of their house, or their own portrait added. Mapmaking was a sort of vanity press of its day.

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Maine is the only state in the northeast without full coverage by the antiquarian atlas, says Carpenter. That’s because the atlases were produced as commercial ventures. Salesmen went where they were told there was a good market. The population of Maine was too small a market. One exception was Aroostook County, although Carpenter doesn’t know why.

Cities were mapped first, and as plots of land around them were sold, their boundaries were added. At one time, as many as 25 companies criss-crossed the country making the maps compiled later in the atlases. Populated areas also had fire protection and insurance maps. The deep South after the Civil War, as well as Nevada and Utah pre-statehood, rarely were recorded in atlases but were covered by large county wall maps, government land patent maps, and state-initiated mapping projects. Altogether, these maps were a unique snapshot of an era and usage over time, including stockyards, factories, refineries, and granaries, which makes them useful today for environmental property analysis.

HistomapWorks began in the most usual of ways. One day in a small New Hampshire bookstore, Carpenter picked up an old Maine atlas that reminded him of a past purchase, a Scarborough map, dated 1871 (his home was built at about that time). Like other cadastral maps, this one was illustrated with houses, churches, cemeteries, and street symbols indicated woods and orchards. Carpenter had studied countless similar maps over the years, but this time it occurred to him that beautiful old maps reveal much more than mere roads and railroad tracks. They chronicle America’s past and offer a gold mine of useful information. Suddenly he saw a business opportunity.

The company was born currently owns about 200,000 North American cadastral maps and views printed from 1885 to 2005. Three-quarters have been scanned and are available on the company’s web site, which makes it the largest digitized online collection in the world. Over 16,000 items are geocoded, meaning searchable by Global Position System (GPS) coordinates. Two years
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go, HMW purchased Title Atlas Com-
pany, which gained them copyright to
thousands of Midwest cadastral maps

Carpenter’s collection also includes
navigational charts and individual an-
quanuar maps, which did not appear in
atlases and have become hard to find.
He said that over the past five years, atlas
prices have skyrocketed, if they turn up at
all in antique shops or estate sales.

“These maps also have a relatively
high mortality rate,” said USM’s Pro-
essor Edney, “especially the wall maps, so
their preservation by Mr. Carpenter is
very much to be praised.”

Historic MapWorks plans to create
a special collection of celebratory charts, battle
plans, and such rarities as ethnographic
depictions from the 1800s. But grabbing
the gold ring will require another round
of financing, enabling the company to
create an “antiquarian world map” com-
bining 200,000 individual maps.

The antiquarian world map will be
like an antique Google Earth, the pop-
ular Internet source for current geo-
graphic information, says Carpenter.
“Like Google Earth, our database spans
the country and eventually will be inter-
national. But unlike theirs, our database
travels through time.” Users would be
able to pan and zoom across surfaces of
the earth as well as move from one cen-
tury to the next. An impressive example
of the company’s technology hangs in
the company’s office. Pieced together
from smaller maps, it is a map taller than
a grown man: the world’s first com-
posite map of New York’s crown jewel,
Central Park, under construction in 1867.

Digitizing maps begins when employees
genly unbind atlases. They
remove leaves, bugs, and any mementos
tucked inside, the residue of decades in
old barns. “Many of the books had a
hard life in offices with smokers, or
they’re dusty from storage and often
smudged” says Jason Brainey, data man-
age. Individual maps are scanned in 24-
inch or 42-inch format, in full color, at
300 dpi (dots per inch). Using technolo-
gy developed by HMW, the maps are
cleaned for clarity. Artificial distortions,
such as tears and ink spots, are removed.
Watermarks and other ancient qualities
are retained to bring the map as close as
possible to its original state.

“People like to see evidence of
time as well as find family names on the
maps,” says Brainey. “We delete handwritten
scribbles that were added later, things
that detract from a map you might want
to hang in your home or office.”

Combining XMAP software from
DeLorme, another Maine company, and
a software program also developed by
HMW, Geographic Information System
(GIS) coordinates are added next. This
gives anyone the ability to conduct
research online by entering the latitude
and longitude of two intersecting streets,
or of a landmark that still exists, linking
it to the same address a century or more
ago. Enter Latitude 42.5978 N, Longi-
tude 71.6667 W for Boston’s Beacon
Hill, for example, and up pop 36 maps of
the area dating from 1772 to 1938.

The latest feature to go live on the
company’s web site is annotation that
points to a specific address, and reverse
annotation providing coordinates that
can be entered into a handheld GPS to
guide the user to a precise spot, such as
the cemetery where an aunt was buried
or the church where one’s grandparents
were married. Carpenter, who has
invested considerable time in ascertain-
ing intellectual property rights, said that
maps published prior to 1923 by law are
in the public domain. Anything after
that year requires extensive copyright
searches to establish the ownership and
copyright status.

The fact that we wrote and own our
software, and own all our data, is key to
our success,” says Carpenter. “We can
build our own commercial models and not
worry about anyone shunting us
down.”

Historic MapWorks is divided into
two business units. A printed products
division involves retail sales of maps and
giftware, both directly from the compa-
n’y headquarters and through a pro-
gram of customization with 400 art and
frame galleries. Gift items include
ceramic mugs, hostess trays, coasters,
journals, mouse pads, and jigsaw puzzles
printed with maps of selected U.S.
landmarks, sports stadiums, golf cours-
es, and academic institutions. A few are
in Maine.

The second unit, on which the company’s finances principally depend,
involves commercial applications
through licensing and subscription
services for the use of the database by
researchers, genealogists, and others.

The first licensing deal was inked
recently with the parent company of
ancestry.com, a ten-year-old web site
that helps amateur genealogists build
their family tree and integrate their
data with that of 500,000 other family
trees and records containing five billion
names. In addition to making the map
database available to ancestry.com’s
registered users, HMW’s individual
printed maps and giftware will be mar-
keted through the site. Currently,
HMW is also licensed to ProQuest, a
vast database for libraries and
researchers worldwide, and has supply
agreements with National Geographic,
Light Depot, and EDR (Environmental
Data Retrieval).

If things go right, Carpenter said,
future projects will tap into the huge
consumer market for online video
towards that end, the company has
already filed a provisional patent to
protect the use of real historical geo-
graphic maps for gaming.

All that, however, is in the future.
Today—right now—you can go to a com-
puter, type www.historicmapworks.com
into the address window of your brows-
er, and travel back in time. With a bit of
luck and imagination, you’ll see the farm
field or street where your house was later.

Contributing Editor Janet Mendelson studies old maps of her neighborhoods in Kittery Point,
Maine, and Somerville, Massachusetts.