The CHM Muse

Meet John Hollar

On July 1, 2008, John Hollar officially started as our President and CEO here at CHM. John has quickly become involved with the entire community of staff, volunteers, and trustees; in just his first week at the Museum, already holding an all-hands get-together, attending the monthly meeting of the VSC, meeting over 20 of the trustees, touring the Yosemite warehouse with the Collections & Facilities teams, and even rolling up his sleeves and participating in the July Volunteer Saturday.

*John receives a tour of the Yosemite by **Karen Kroslowitz** and **Paula Jabloner** of Collections. Below, **Dennis Cassar** demonstrates the cool features of the guided high-reach forklift system*

John was chosen after a lengthy and very thorough CEO search - Len Shustek said in the All-Hands that over 300 candidates were reviewed and 100 interviewed, with John being by far the outstanding choice of everyone on the selection team. You can see John's bio at http://www.computerhistory.org/staff/John,Hollar/ and the CHM Press Release of his appointment at http://www.computerhistory.org/press/CHM-Appoints-New-CEO.html

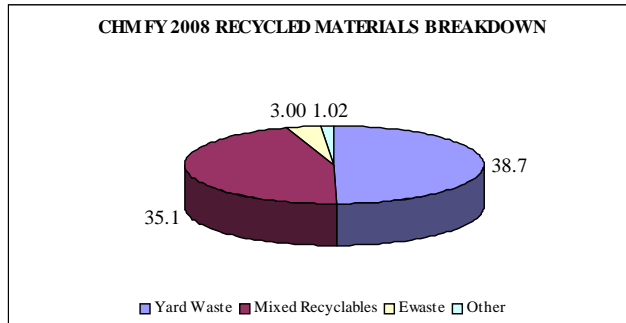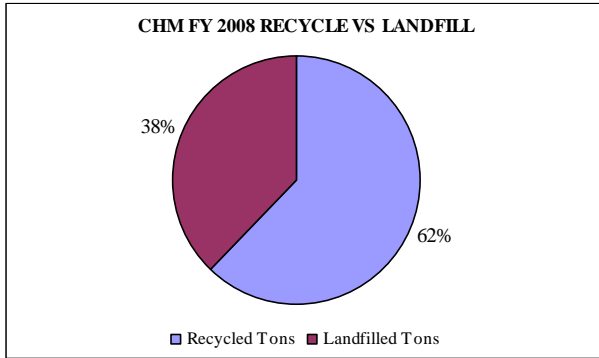## Inside This Issue

Measuring CHM's Environmental Footprint

In June, CHM started a new project at the Shoreline building to assess the environmental impact of the museum's daily operations and determine ways to effectively improve our green practices. After an initial team of committed staff and volunteers was formed, including **Marlen Cantrell, Jeanette Wood, Shelley Bergin, Sara Lott, Allison Akbay, Dennis Cassar, Jim Somers, Jay McCauley, Valerie Alston** and exec staff sponsor **Gary Matsushita**, the next step of course was to come up with a catchy team name: thus **Greenstep** was born. **Dana Chrisler** of the IT department submitted this winning title in a naming contest that had over 50 clever entries.

The Greenstep team's first assignment by the end of month one was to complete a thorough assessment of our current footprint- you can see the interesting results inside this issue of The Muse. And already in the works and soon to be announced are the first steps in addressing the target areas we've identified. Stay tuned!

GreenStep: An Initial Wastestream Assessment

Cities and counties in California have set a 50% diversion of waste from landfills as its current goal. We measured the ratio of recycled materials vs landfilled materials from our CHM operations, and found that our existing diversion rate is 62%. Sounds good at first glance, but there is a lot of room for improvement in the 46.8 tons of waste per year we now put in the "trash". We expect to increase our recycle ratio dramatically in the next few months by getting more recyclables out of our trash bins.

CHM FY 2008 RECYCLE VS LANDFILL

38%

62%

■ Recycled Tons ■ Landfilled Tons

CHM FY 2008 RECYCLED MATERIALS BREAKDOWN

3.00 1.02

38.7

35.1

□ Yard Waste ■ Mixed Recyclables □ Ewaste □ Other

Category	Total Annual Weight (Tons)	Recycled	Landfilled	% Recycled
3 yd Trash Bin	46.8	0.00	46.80	0%
3 yd Mixed Recyclable Bin	35.1	35.10	0.00	100%
Yard Waste	38.7	38.70	0.00	100%
E-Waste: hardware	3	3.00	0.00	100%
E-Waste: media	0.1	0.00	0.10	0%
Wooden Pallets	0.72	0.36	0.36	50%
Fluorescent & Incand. Lights	0.06	0.06	0.00	100%
Confidential Paper	0.39	0.39	0.00	100%
Toner cartridges	0.19	0.19	0.00	100%
Alkaline Batteries	0.02	0.02	0.00	100%
Totals	**125.08**	**77.82**	**47.26**	**62.22%**

A Greenstep Priority Goal: Reduce this number!

A Greenstep Goal: Purchase goods w/recycled content!

CHM Wastestream Characterization

Here are some quantities of the common consumable office items that CHM uses on an annual basis. Our goals here will be to 1) reduce usage where applicable 2) buy product with recycled content wherever possible
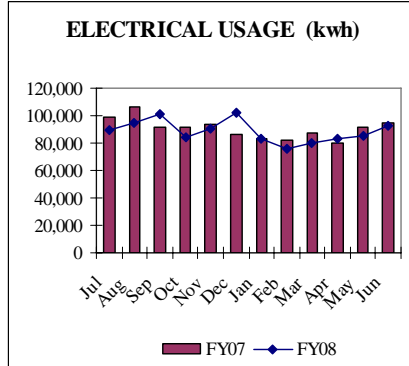
Office Supplies	Total Used in FY08
8.5 x 11 paper	240,000 sheets
8.5 x 14 legal paper	40,000 sheets
11 x 17 ledger paper	10,000 sheets
Envelopes	3,000 envelopes
File folders	1200 folders
Binders	168 binders
Laser toners	94 toner cartridges

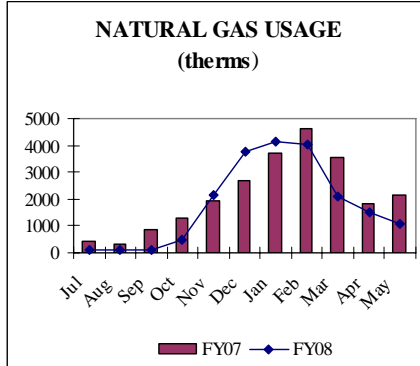| Janitorial Supplies	Total Used in FY08
Toilet paper	5,280 rolls
Paper towels	3,072 packages
Toilet seat covers	30,000 covers
Trash can liners 40x46"	10,000 liners
Trash can liners 24 x 23"	8,000 liners
Trash can liners 33 x 40"	5,000 liners

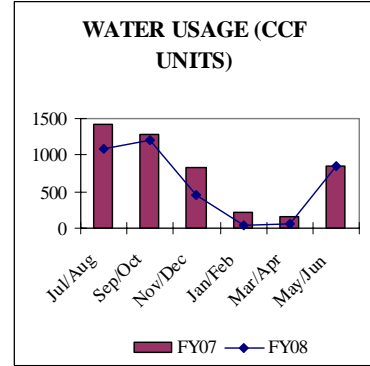| Building Supplies	Total Used in FY08
Fluorescent tubes 4'	180 bulbs
Incandescent bulbs	124 bulbs
Alkaline batteries	1000 batteries

GreenStep: Our Natural Resource Usage

In FY08, CHM facilities implemented several measures to monitor & reduce our energy usage, both for financial and environmental purposes. We've had very positive results so far, and will continue to further reduce our annual energy & natural resource consumption. ***Resource reduction is a good business practice!***

ELECTRICAL USAGE (kwh)

NATURAL GAS USAGE (therms)

WATER USAGE (CCF UNITS)

FY08 Electricity reduction of 2.1 %
6.8% cost reduction: $11,484 savings

FY08 Gas reduction of 16.3%
14.5% cost reduction: $4,159 savings

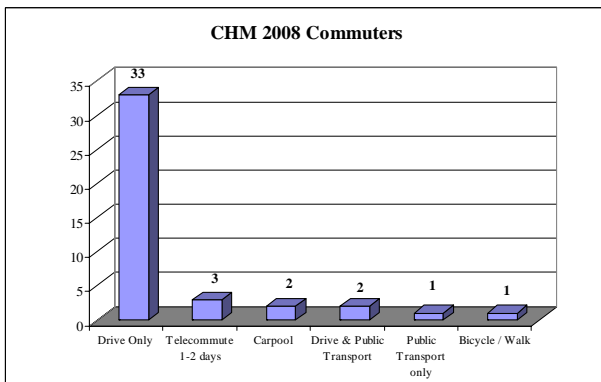**FY08 Water reduction of 22.5%**
36% cost reduction: $7,818 savings

Category	FY08 Usage	FY07 Usage	Unit	
Electricity	1,063,294	1,085,966	KWH	Measured in kilowatt hrs. 1 kwh is the equivalent of running ten 100-watt light bulbs for one hour. Largest consumption by HVAC (heating/cooling/ventilation); followed by lighting,
Natural Gas	20,290	24,245	THERMS	One therm is approximately the energy equivalent of burning 100 cubic feet of natural gas. Largest consumption is building heating system
Water	2,758,624	3,561,228	GALLONS	Largest consumption is exterior landscape watering. Typically measured in CCF Units- 1 CCF = 748 gallons

CHM COMMUTE CHARACTERIZATION

CHM 2008 Commuters

The above data is based on CHM Staff commutes only- we'll add-in our volunteers commute stats in our next version. As you can see, our commute has a substantial environmental impact in addition to our daily museum operations.

COMMUTE IMPACT STATISTICS	
No. of Staff Daily Commuters	41
Wkly RT Drive Commutes	182
Weekly Miles Driven	5,611
Annual Miles	291,772

ANNUAL POLLUTION / FUEL CONSUMPTION		
POLLUTANT	**PROBLEM**	**AMOUNT**
HYDROCARBONS	SMOG	1,864 LBS
CARBON MONOXIDE	POISONOUS GAS	14,139 LBS
NITROGEN OXIDES	ACID RAIN	964 LBS
CARBON DIOXIDE	GLOBAL WARMING	233,418 LBS
GASOLINE	IMPORTED OIL RESOURCE DEPLETION	12,838 GAL

Spotlight On: The IBM 1401 Restoration

By Robert Garner

The IBM 1401 restoration project has been buzzing.   A "new" 47-year-old 1401 system was procured from a family in Darien, Connecticut. Independently, we located the 1401's lead designer, Mr. Francis Underwood of Lockhard, TX, and the 1401's chief evangelist/marketer, Sheldon Jacobs of Saratoga, CA.   Also, the original German 1401 has been up and running our system demo program for visitors.

Synopsis of our new 1401 acquisition

In August, I received an unexpected phone call from a Scott Bellefleur telling me of his family's 1401 sequestered in the basement of their modest home in Darien, CT. His father, Buzz, had operated a small billing service from the house for 23 years, from 1972 until 1995 (!). Buzz had asked Scott to search the web for interest in the 1401 as a preferred alternative to scrapping it.   Scott found Ed's 1401 restoration web site, noticed our dedicated team of restorers, and felt the Museum could be a desirable home for their treasured computer, and a set of software release tapes. By October I was flying to Darien to inspect their relic. I found it to be in excellent shape, as it had been operated in an air-conditioned and dehumidified space up until 13 years ago.

Convinced that this 1401 could be more reliable than our German 1401 (in an outdoor garage for 27 years), while also doubling our inventory of swappable parts, I next raised the purchase funds from half dozen donors, including Steve Wozniak, who visited our 1401 last year, noting its use as an educational tool.

For transportation, I was able to enlist the help of IBM Logistics and their preferred carrier, McCollister's, who generously offered us an at-cost quote for transportation and recommended a local rigger and crane service.   Frank King gladly agreed to accompany me to Darien in April for the prep and extraction, which, of course, happened on a cold and rainy day. The first day, we cleaned out the basement and wrapped up the 13 units, weighing a total of seven tons. The next day, the riggers skillfully squeezed and, with a 30-ton crane, lifted them each out, giving them the light of day for the first time in nearly four decades. Our new 1401 is now resting pretty in the back of the restoration room and we expect to have it powered up soon.

While Frank and I were on the East coast, we also visited Paul Lasewicz and his expansive IBM Archives storage room in Fishkill, NY, and his fancy history research facility in Somers, NY. In Fishkill, I serendipitously found a set of Fran's memos showing the evolution of his design, called SPACE in 1957. In Somers we received copies of more 1401 documentation and 1401 marketing materials and photographs.   The IBM Archivists also provided a dozen 1401-era "IBM Oral History of Computer Technology" transcriptions by Larry Saphire, which we're posting.   One could spend weeks volunteering in the IBM Archives!

Finding Fran Underwood

The tale of finding Fran Underwood involved some sleuthing. My first good clue was a web site music review by Dorothy Underwood Harper of Icelandic composer Johann Johanasson's sixty-piece string quartet "IBM 1401: A User's Manual". She had given the CD to her father, "one of the original 1401 design gurus in New York"

1401 restoration team members:
Front Row Judith Haemmerle, Robert Garner, Frank King
Back Row Glenn Lea, Ron Williams, Bob Erickson, Bill Flora, Joe Preston, Stan Paddock, and Ed Thelen

CT 1401 is hoisted from Buzz Bellfleur's Darien backyard, in the rain of course.

*Museum volunteer **Frank King** & IBM Archivist
Paul Lasewicz at the storage facility in Fishkill,*

1401 Restoration continued….

as an 80th birthday present! Within in several weeks, with the help of a Lockhart neighbor, I was in contact with Dorothy and Fran. He is delighted that we've restored a 1401 and that we have found him. He asked if I might look for the 1401's main marketing proponent, Shel Jacobs in Saratoga--soon confirmed.

All Hands Meeting
At our 1401 all-hands on June 25th, Fran generously spoke on the phone of his early days in Endicott, rising through the ranks as a tool designer, customer engineer (CE), 1401 lead architect, then transferring to IBM San Jose. Shel also attended the meeting and told an engaging story of fighting to keep the 1401 program from being canceled due to a clueless central planner. Recordings of Fran and Shel's talks and Fran's 1968 Oral History are on the 1401 web site.

Bill Flora & *Stan Paddock* *preparing the workshop*

At the meeting, the 1401 team watched a first screening of "Raiders of the Lost Basement" depicting the extraction of the CT 1401 from the basement of Buzz Bellefleur's Darien home. We also viewed the Oct 5, 1959, worldwide, closed-circuit TV 1401 announcement (from IBM Archives). And listened to the NPR interview of composer Johann Johanasson on his motivations behind his classical music based on the 1971 decommissioning of Iceland's first computer, a 1401, by his IBM CE father, who had recorded primitive 1401-generated music induced into a near-by AM radio.

We're always on the lookout for new volunteers to join in on the the project, especially with our new 1401 coming up. The team is in every Wednesday and also some Saturdays.   You're welcome to stop by and bring your friends and colleagues. You'll likely leave with a souvenir 1403-printed sheet bearing your card-punched name in big letters and a short article about the 1401.

INPUT / OUTPUT

Fellows
We've selected and announced our 2008 Fellows:
- **Jean Bartik**- One of the first programmers of the groundbreaking ENIAC computing system in 1945. She later assisted in converting the ENIAC system into one of the first stored-program computers.
- **Bob Metcalfe**- Led the invention, standardization, and commercialization of Ethernet.
- **Linus Torvalds**- Created the Linux kernel and oversaw open source development of the widely-used Linux operating system.

Marquee PR
As usual, we've received some great coverage this month, among the top were…
- **Scientific American Magazine,** "Difference Engine No. 2" July 2008
- **Gizmodo**, "Things No One Gives Microsoft Credit For (But Should)" June 27, 2008
- **BBC,** "The secret of Bill Gates' success," June 19, 2008
- **Semiconductor International**, "Ruminations on What Might Have Been" June 12, 2008

Summer Events Coming Soon

Hail to the Historians: Richard Tedlow, Harvard Business School Professor and Historian to Lead the IBM 360 HBS Case Discussion
Thursday, August 14 at 7 p.m.

CHM Presents: IBM Stretch –
Failure that Built Ultimate Success
Panelists Fran Allen, Eric Bloch, Fred Brooks,
& Harwood Kolsky
Thursday, September 11 at 7 p.m.

Welcome Mat
Say hello to our newest staff members:
John Hollar, President & CEO;
Jenny Daly, Move Assistant; Jen Levy, Move Assistant;
Elisa Paat, HR Generalist; and
Karen Kroslowitz- new position as Registrar

*New Registrar **Karen Kroslowitz**, new move assistant **Jenny Daly**, volunteer **Mary Ellen Petrich**, volunteer **Bernard Yeh**, new move assistant **Jen Levy**, and move assistant **Cheryl Rowley** have all been instrumental in the great progress this month in our Collections relocation project.*

This Month in History
July 11, 1976
K&E produced its last slide rule, which it presented to the Smithsonian Institute. A common method of performing mathematical calculations for many years, the slide rule became obsolete with the invention of the computer and its smaller, hand-held sibling, the calculator.

Volunteer Community Updates by Jim Somers

**CHM Volunteer/Staff Appreciation Celebration –
Friday, August 8th from 7 to 10 pm**

Celebrating another fabulous year, the Museum will be hosting a Movie Night and Volunteer/Staff Appreciation Celebration. **Mark your calendars**, this event will be taking placing Friday evening, August 8th from 7 to 10 pm. More information to follow!

Volunteer transportation expenses are tax deductible

1. Volunteers can deduct car and transportation expenses incurred getting to Museum and back home.
2. Volunteers who drive can choose between deducting actual gas and oil used or else take a mileage deduction at the rate of 14 cents per mile. Volunteers can also add in parking fees and tolls.
3. Volunteers that take public transportation can deduct train, bus or taxi fares.

The Why & How of Posting Your Volunteer Hours
With CHM ending another fiscal year, it's time for all volunteers to make sure that they have posted all their volunteer hours from July 2007 to June 2008. Institutions like CHM benefit greatly by the number of hours volunteers donate. In addition to the direct link between the time spent volunteering either front or back of house and the Museum's mission of preserving and presenting the artifacts of the information age, there is a direct relationship between the "hour" and the "dollar" raised by the Museum's development team. Simply put, the more hours donated, more grant opportunities that open up to the Museum.

A prime example of the impact of volunteer hours on donations is the support the Museum's Collections Cataloging and Reconciliation Project has received over the last two years in equipment donations from IBM. As the Museum moves forward with the development of the Timeline Exhibit and begins to develop an Education program, accurate and up-to-date information on the number of active volunteers and their hours will be vital to the Museum success in securing additional funding. Many organizations, especially corporations and foundations, look at the health of organizations volunteer program when making funding decisions.

How do you keep track of your time, how do you add your hours and where should you count them? If you have signed up for a project or shift through the volunteer calendar, you have done all that you need to do. Your hours will be automatically calculated based on the standard shift length. For projects that do not get listed on the volunteer calendar, you will need to manually log your hours. This can be through the "My Hours" section of the volunteer website. If you have forgotten your login and password, please contact Jim Somers Maintaining an up-to-date volunteer profile is of equal importance. The volunteer program relies on up-to-date contact information. Also maintaining current employer information can be vital for our fundraising efforts given that many companies ask if current or retired employees volunteer.

Help Sought with Content on CHM Volunteer Page

We've all been enjoying the gradual improvements as the CHM website is redesigned. Now it's our turn – the Volunteer Page is due for its makeover. We'd like to include a few quotes from volunteers about what you get out of being at the museum or why you volunteer here. Please take a minute to send us a sentence or two – serious comments, humor and irreverence are all welcome. What did someone say to you that got you interested? How can you interest someone else? Please help us get some good text for our new page. Content can be sent to Jim Somers .

Notes from The VSC
By Judith Haemmerle **July 8, 2008 meeting**

Thanks were given to retiring VSC members Jay McCauley (Chair), Dan McInnis, Ken Sumrall and Lyle Bickley. In turn, new members welcomed included Dave Bennett, David Cortesi, Peter Samson, and Marcin Wichary.

Exec Staff Updates
- **Kirsten Tashev** updated the VSC on the Education Director search. It remains a high priority – no suitable candidate has yet been found.
- **Bob Sanguedolce** said the "Get Involved" section of the CHM website is now in development. An exercise was conducted in the meeting where VSC members wrote & submitted quotes about volunteering for the new CHM Volunteering page. Bob also discussed the volunteer web site; it has reached its "end-of-life" point and now needs to be improved.
- **Gary Matsushita** reported on the progress of the major Collections move- it is 25% completed and the large mainframes are starting to move over to Yosemite this month. The Greenstep project was briefly discussed, and ways to involve volunteers, including things such as carpooling to Yosemite for volunteer days. He also gave a background to the Shoreline streetside landscaping project that is now underway.
- New CEO **John Hollar** attended the meeting and introduced himself to the group . He stressed that two things that attracted him to the Museum was the continuity of the Board of Trustees, and the extensive commitments from the volunteers. John accepted an invitation to participate in Saturday's Volunteer Day

General Items:
- VSC will host a CHM/Volunteer "social" mid-Sept
- A Brown Bag will be held July 16, 12 – 2 p.m. to update volunteers on the move, and to honor Allison Akbay, who is leaving the museum in July.
- The Annual Volunteer Appreciation event will be Friday, August 8, 7-10 p.m. A movie-theme night.
- Over 4,000 guest have now seen the Babbage presentations! Training for Presenters, Checkers, and Crankers will continue on Tuesdays. Dimmer switches for the display lights are now installed; Facilities will look at alternative lighting for the back of the Engine.
- Randy Neff has agreed to oversee the volunteer library; Gary & Judith will look at redesign ideas for the entire lounge area.
- Peter Samson courageously offered to be the Recording Secretary and was enthusiastically thanked by all.

The Editors Desk