Academic Libraries and CAS: A Match Made in Heaven

248th ACS National Meeting & Exposition
Roger Schenck – August 13, 2014
Abstracting journal authorized in 1906

- Noyes encouraged the American Chemical Society (ACS) to publish a separate and more comprehensive abstracting journal
- ACS industrial chemist committee advocated “that the whole field of chemistry, the world over, be covered by abstracts”
- 1906 – ACS Council authorized publication of an “abstracting journal”
Chemical Abstracts first published in 1907

- 1907 – Chemical Abstracts began publication
- William A. Noyes, Sr., first Editor (1907-1909)
- Office in the National Bureau of Standards in Washington (1907)
- Office moved to the University of Illinois (1907-1909)
Production of CA moved to Columbus, Ohio

- Austin M. Patterson, Editor (1909-1914)
- Invited by the head of the Chemistry Department to move the CA editorial office to The Ohio State University campus
- John J. Miller, editor (1914)
The Ohio State University was home for CA for almost 60 years

- Four-member office in chemistry building classroom
- 1928: office in McPherson Chemistry Building
- 1955: staff about 100 – moved to own three-story building on OSU campus
- 1960: staff about 300 – fourth-floor added to building
Chemical Abstracts Service today…
Chemical Abstracts logo introduced in 1928

Designed by Professor Thomas French at The Ohio State University
The most far-reaching development . . .

- CAS Chemical Registry System
  - Grew out of concept suggested by Malcolm Dyson
- Initial registry database was file of fluorine compounds
  - Coded using Dyson-IUPAC linear notation
  - Stored on McBee edge-notched cards
  - Each compound assigned a “register number”

![Chemical structure and notched card image](image-url)
Experienced with connection tables...

- Structure represented by a tabular arrangement of atoms and bonds
- Harry Morgan (CAS) built on the work of Donald Gluck (Du Pont)
  - Perfected an algorithm that converted structure diagram into unique tabular form
  - Became basis for CAS Chemical Registry
Although there are 327 Dana Roths in U.S., he is unique…
Just a few examples of CAS Collections in academic libraries

Photo kindly provided by Andrea-Twiss Brooks
University of Chicago

Photo kindly provided by Judith Currano
University of Pennsylvania
Bringing chemical information to the chemist’s desktop

- SciFinder (1994)
  - Subscription-based client-server application for Windows or Macintosh platforms
  - Access to full range of CAS databases
  - GUI made searching conversational and intuitive
  - Software automatically considered synonyms and spelling variations

- SciFinder Scholar (1997)
  - Especially adapted for campus-wide use by students and faculty
Five universities advised CAS on the first version of SciFinder Scholar

- Emory University
- The Ohio State University
- University of Pittsburgh
- University of Rochester
- Stanford University

“Wow! … response time is much snappier than Crossfire.”
  – Faculty at Pitt

“… the interface is superior to Crossfire.”
  – Grad student at Pitt

“… CAS content is critical component of academic research.”
  – Faculty at Rochester
Dana Roth was active on CHMINF since its inception … 745 postings since 1991

“There were 4,865 messages sent by CHMINF-L in the first 41 months of its existence. Dana Roth, chemistry librarian at Caltech, had submitted over 175 items to CHMINF-L by October 1, 1994. On that date, there were 1,042 subscriptions to CHMINF-L, at least 160 of which were to commercial institutions.”
(CHMINF Archives)
Who is Dana Roth? A Library Legend!

“Dana Roth is at least an institution if not a legend among chemistry librarians in particular, and science and engineering librarians in general. In his forty years at Caltech he has influenced two generations of librarians worldwide. His influence continues unabated as librarians from all over the world attest.”
12 Publications in 2014 alone!
Through the years, academic Key Contacts have been essential to the success and growth of CAS

- Academic Advisory Committee
- Committee on CAS
- Future Leaders in Chemistry
- ACS on Campus
- Focus groups
- User training & testing
- CHMINF feedback
- Testimonials
Dana has made significant contributions to the chemical information enterprise

- Chemical Information for Chemists (book, editor)
- Open access publishing
- H-index and impact factors
- Chemistry search techniques
- Nomenclature of chemical compounds
- Toxic and hazardous compounds
- Patents and trademarks
Dedicated to providing students and postdocs from around the world an opportunity to help shape the future of chemical information.
“The session where people get to give some insights about SciFinder, what they would like to be improved should be longer. I think it was also good to give our ideas about products that are still being developed.”

“Very interesting to see prototype versions of SciFinder. I felt listened to and able to contribute to the future of SciFinder.”

“Great opportunity to find out and contribute to how SciFinder is being marketed and meet the marketing team.”
It has been a great journey… one that we hope will continue for many years to come. We all wish Dana good luck on all his future endeavors.

Thank you!
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