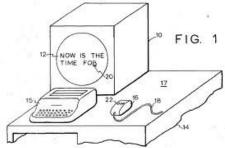
SRI-Relevant Items at the Computer History Museum B 1 – Shakey the Robot Software Theater Artificial Intelligence & Robotics 8 2 - PARC's Alto 0 Memory Minicomputers 12 Computer area, Storage Digital Logic (Engelbart era **Mainframes** Computer Graphics, equipment to Music & Art Œ be added) 6 (5) Input & Real-Time Early 3 - Mouse Computing Computer 16 Companies **Patent** Computer Supercomputers 17 Games 4 Personal 4 - Last Model (3) Computers Birth of the 18 Computer Analog of a Packet Radio Computers Computing & the Web 5 – Anderson-Jacobsen Modem 1 (2) 6 - Network Information Center Punched 20 Cards 7 – Packet Radio Van Model What's Next? (Actual Van Outside) 8 - The Mouse Computer Chess Exhibition Entrance 9 – Some early email 10 – Perhaps the first Orientation Theater 1 network spam Museum Store **Main Lobby** Cloud Reception Cafe Î **Main Entrance** PDP-1 Restrooms Elevator



- 1 Charlie Rosen with Shakey, the world's first mobile robot capable of reasoning about its environment.
- A\*, Shakey's route finding algorithm, is the basis for today's auto GPS units. AIC Directory Ray Perrault says it may be SRI's most pervasive AI impact yet.
- **2** The Alto was heavily influenced by members of Engelbart's lab who moved to PARC as his lab declined in the mid-1970s. PARC now part of SRI.



**3** – The patent by Engelbart, with Bill English's engineering, for the mouse was the most effective of several devices they tried for controlling the screen cursor they called the "bug."



4 – This was the last packet radio made for ARPA. The so-called low cost radio was used in large to test network routing algorithms rather than in the field. The only original field Packet Radio is in the Internet Van outside. Packet Radio was the world's first mobile digital network and basis for internetworking.



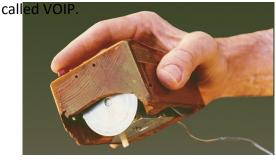
**5** – The acoustic modem had two starts at SRI: one, invented by John Van Geen, led Reid Anderson to sell the product shown, the other, slightly earlier one, was for the deaf community by SRI's Bob Weitbrecht. Both patents were awarded in 1970.

**6** – Here are some images of Engelbart's Augmentation Research Lab. It is included here because of its importance in bringing the second ARPANET node to SRI. The first network link was in October 1969, based on modification of RFC 2 by SRI's Bill Duval on host-to-host interaction.





7 – The Packet Radio Van, now the "Internet Van." SRI's completion of the internet protocol TCP for a terminal in this van enabled the first internet transmission to occur in 1976 from the above left courtyard of Rossotti's. A year later a satellite net was added. The van was also used to test early internet telephone technology now



**8** – In his own eyes the mouse was a tiny piece of Engelbart's vision and yet its ubiquity has somewhat subrogated his real contribution, personal and collaborative computing. In Dec 2008 Logitech alone had shipped its one billionth mouse! Because SRI's patent expired in 1987, licensing yielded SRI only about \$150K. The original mouse is on loan to the Smithsonian.

- **9** Some early emails from the archives of the Network Information Center, which for 20 years was the gateway to ARPANET and Internet use.
- **10** Email of first network spam. This and (9) provided by SRI's Jake Feinler, the long term director of the Network Information Center.

# Other SRI Contributions Not on Display at the Museum Plus Those <u>Under Discussion for Transfer</u>

There are a number of other SRI items either at the Museum or strong candidates to be placed there in the near future. Here is a list of them, some with pictures.

### Already at the Museum

- 1. The evolution of Engelbart's world of interactive computing it of great importance. First, an SRI-made replica of Engelbart Workstation used at the 1968 Mother of All Demos is shown on the left below.
- 2.A "line processor," part of the late 1970s Engelbart workstation set-up, is similar to that shown below on the right. I've been working with the Museum to expand floor space to include both but it's gong slowly.





3. ERMA-related artifacts consist of a memory processing unit (all that remains after Bank of America paid SRI to destroy the ERMA prototype) and a traveler's check processing machine, Both are shown below. It has other artifacts of BankAmericard, the first major credit card, whose feasibility is rooted in ERMA's success.

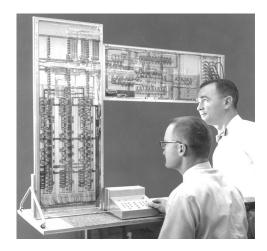




## Already at the Museum (cont'd)

- 3.(continued) The Museum is in the process of accepting from the Bank of American the only remaining ERMA machine. It is a transistorized version of SRI's prototype built by GE. Shown on the right below.
- 4. The first all-magnetic computer shown on the right below with Bill English and Hew Crane.





5. The Packet Radio Van, now called by many the "Internet Van," is located outside the Museum, under cover. It houses the only remaining packet radio and digital equipment used in the first 1976 and 1977 TCP internet protocol demonstrations.

#### **Under Discusssion with the Museum**

- SRI's Telepresence Surgical System.
   Early prototypes of this are at SRI and wanted by the Museum. Haven't settled on parameters of transfer. The current product is Intuitive Surgical's da Vinci Machine and it is now in worldwide use.
- SIRI the digital assistant. Not yet designed as to how it will be displayed.



#### More to Come?