For The 1401— Up, Up And (Now) Away

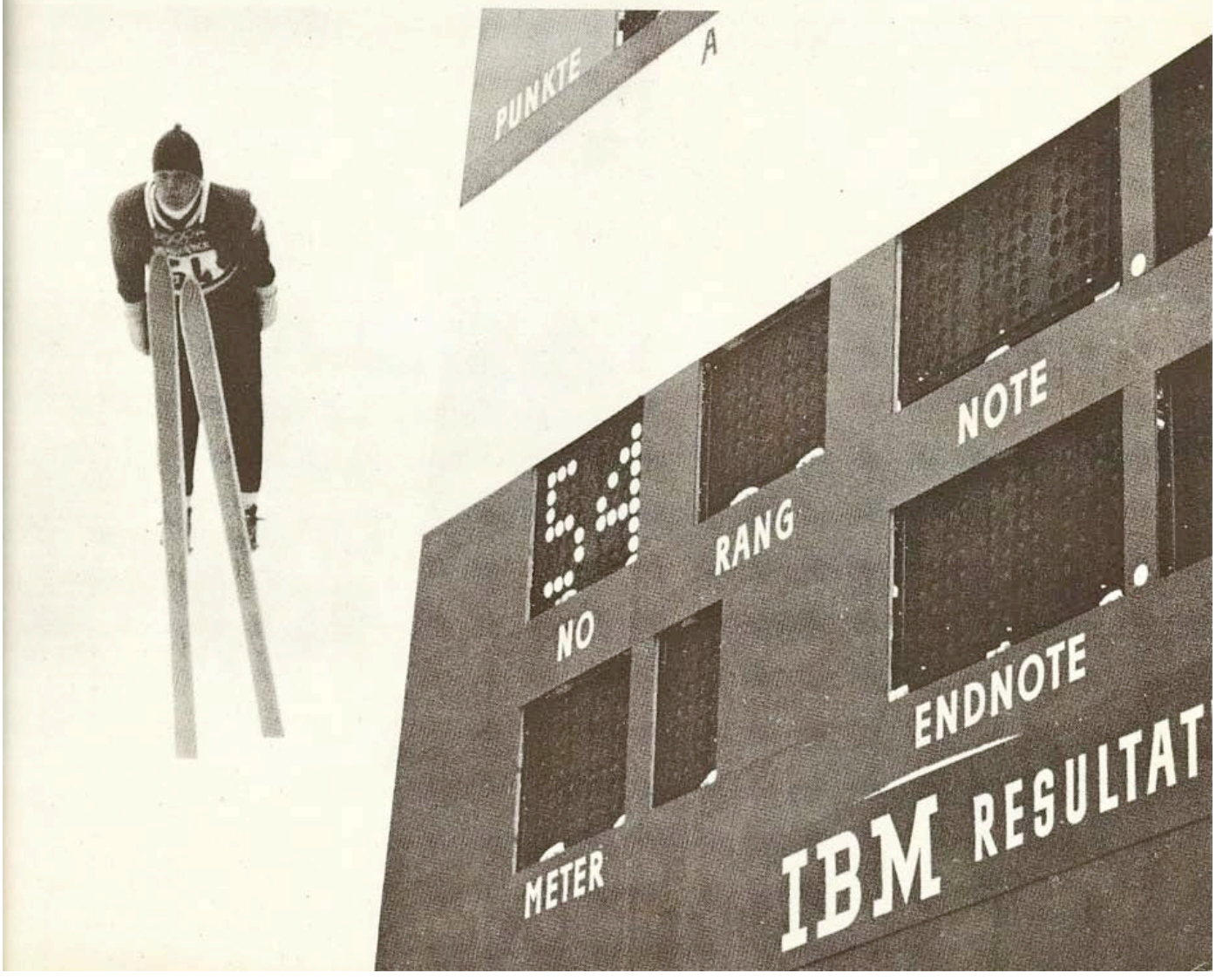
From the slopes of Innsbruck to the rails of Senegal, it took the world by storm, converting skeptics into staunch believers in the practicality of data processing. IBM *sold them by the thousands. Now it's an era ended: The 1401 is being dropped from the product line.*

by Angelo M. Donofrio

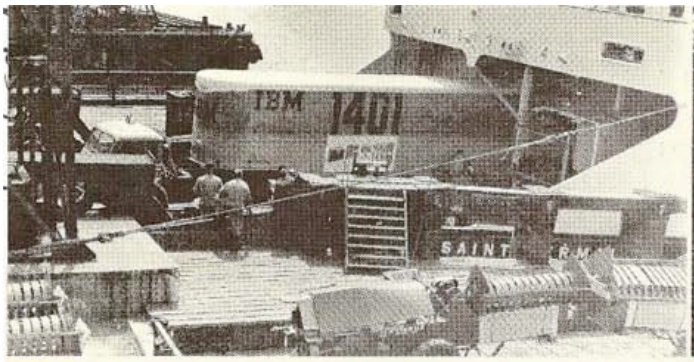
A machine which, just 12 years ago, opened the computing age to thousands of businessmen around the world and changed the face of IBM is being relegated to antiquity.

The legendary 1401 computer will officially be removed from the product line next month, pushed into historical limbo by at least two families of machines, System/360 and System/370, including the Model 135 (*see preceding story*), whose performance is dazzling compared to the 1401.

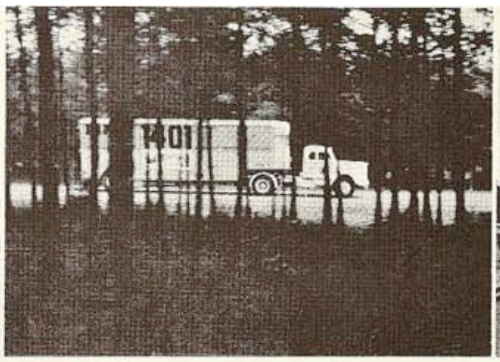
Yet, many people remember vividly that day in 1959 when 50,000 customers in 92 U. S. cities and three in Canada watched the product announcement over the nation's largest closed-circuit television network. Since that time, the 1401—whose code name was Stored-Program Accounting-Calculat-



While Veikko Kankkonen of Finland was jumping his way to a gold medal at Innsbruck in 1964, an IBM *1401 was busily calculating the final standings of more than 1,300 athletes in the Ninth Olympic Winter Games.*



Datamobile landing in Dunkerque . . .



passing through the forests of Sweden . . .

near Parliament and Big Ben

The 1401→ Show Takes To The Road . . .

ing Equipment (SPACE)—made data processing both fashionable and feasible for a tremendous number of business customers who had never even seen a computer before. Therein lies its unique contribution.

Charles E. Branscomb, who headed development of the machine at Endicott and is now an assistant general manager of the Data Processing Group, explains: "The 1401 brought the cost of a stored-program machine down to a level that had never been approached before. By doing that, it vastly broadened the base of data processing customers.

"We saw the machine primarily as a growth path for high-volume unit-record users," continues Branscomb, who was an area manager for accounting machines before taking on the 1401 project. "We had learned from the 650 that businesses needed a machine that could reduce job costs over conventional punched card equipment.

"A lot of people thought we were crazy because, even though we could easily have added a lot more features, we didn't. Our cost objectives were inviolate."

As it turned out, Branscomb wound up losing a bet (the prize was a felt hat) to his boss when the cost of the 1401 fell a fraction of a percentage point short of the target. All of which became academic because, soon after the product's announcement, the nation went on a data processing buying spree. By 1961, the company's annual report could declare with some modesty that the 1401 had become "one of the world's most widely used data processing systems."

In Washington, D. C., it was pressed into action by the Peace Corps, matching volunteers with the needs of underdeveloped countries around the world. In Nigeria, it became the country's first computer system, speeding payroll preparation and keeping track of freight cars for the Nigerian Railway Corporation. At Innsbruck, Aus-

IBM in the land of the Incas

Once this lovely, lonely valley, [illegible] the Río Santa Eulalia tumbles [illegible] the Andes toward the Pacific, [illegible] armoured conquistadors on their [illegible] to carve an empire. Now again [illegible] meted conquerors have moved [illegible] construction gangs harnessing [illegible] river with roaring machines. [illegible] vast hydroelectric project will [illegible] the power supply of Lima, Peru's capital.

Reinforced with water piped—[illegible] altitude of 14,000 feet—beneath [illegible] Cordilleras de los Andes, the Santa Eulalia will be turned out of its [illegible] poured into a tunnel driven [illegible] miles through the mountains. At the tunnel's end the torrent will leap [illegible] feet down to drive four great generators in a cavern carved deep within the living rock. This one station will produce more electricity than Lima now receives from all its power plants.

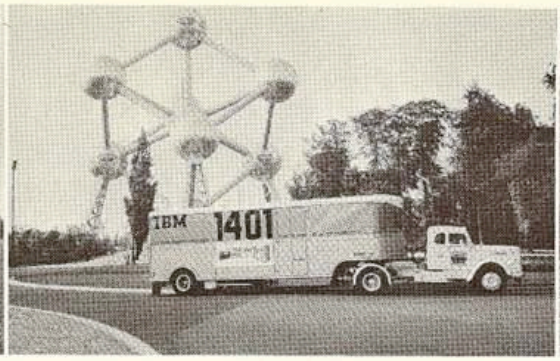
The IBM computer shown on the ledge above the valley will help the Lima Light and Power Company distribute this power efficiently. And using a host of complex factors, the data processing system will show the best sites for transformers, substations, power lines. Later the computer will be equally valuable to Lima Light for accounting and financial analysis.

When the first Europeans came to Peru they found the Incas already solving mathematical problems by moving grains of maize on a marked board, recording the results by knots in a string—and getting accurate answers faster than the newcomers could with pen and paper. With this tradition, no wonder the heirs of the Incas use the most advanced of mathematical aids—an IBM computer.

IBM

IBM WORLD TRADE CORPORATION
OFFICES IN PRINCIPAL CITIES OF THE WORLD

An ad in the Andes: As part of its 1961 campaign for the 1401, IBM *World Trade Corporation showed the computer at work for the Lima (Peru) Light and Power Company, helping to distribute hydroelectric power efficiently.*



at the Atomium in the Brussels World's Fair . . .

and the Milan Railway Station.

...a, it was used to score the Ninth Winter Olympic Games. In December 1962, it anchored both ends of a transatlantic test that demonstrated the potential of satellite communication for processing large quantities of business information. And, in recent years, hospitals, universities, governments, and businesses around the globe, the 1401 has earned a solid reputation.

Making It Big

When production stopped in December 1965, more than 10,000 machines had been built at Endicott and Sindelfingen. Thousands more were reconditioned. No one knows exactly how many 1401s are still purring, but hundreds are now being leased, and during the life of the product more than 1,000 were purchased.

The oldest operating 1401 is still churning for the Subscription Services Division of Time Inc., on the fifth floor of the Time & Life Building in Chicago — a reflective-glass, brown steel structure on the near North Side. Robert E. O'Reilly, who was sales assistant when the machine was installed in 1960, is still there, too—as advisory marketing representative.

"Bob O'Reilly personally taught us how to run the 1401," says Donald J. Donaghue, manager of Time's data center. "We had publication schedules to meet. Once the machine arrived we didn't waste any time.

"Flat trucks all over the place were stacked with forty million punched cards. Without tapes we would never have made it, and without the 1401 we would never have been able to transfer all our subscription data."

Today, the original 1,100 reels of magnetic tape has jumped to 50,000 reels; the number of Time data processing people has grown from six to 100, working on three shifts; and the equipment, which fills two floors, now includes two System/360 Model 30s, two Model 50s, and a Model 65 with 120 IBM 2260 display terminals to enter and retrieve subscription information for *Time, Life, Fortune, Sports Illustrated,* Time-Life Books, and Time-Life Records. In the works: plans to convert to disk storage, and orders for System/370.

O'Reilly, the key IBM man behind it all, is a 6-foot 4-inch salesman who joined the company after receiving a bachelor's degree in management from Loyola University. He is only 38 years old, but his 13-year IBM marketing career straddles every generation of equipment at Time.

"As a sales assistant," he says, "I had about three titles, but I spent most of my time wiring control panels and installing systems. I came to IBM because I liked the people I was exposed to, and it looked like an industry that would really go places. The work required a potpourri of talents. The atmosphere was highly adventuresome."

Monroe C. Walton, the original operator on the 1401 and now assistant programming manager in a department with 45 programmers, recalls that the new 1401 gave him "a great sense of power," manipulating masses of data at high speeds.

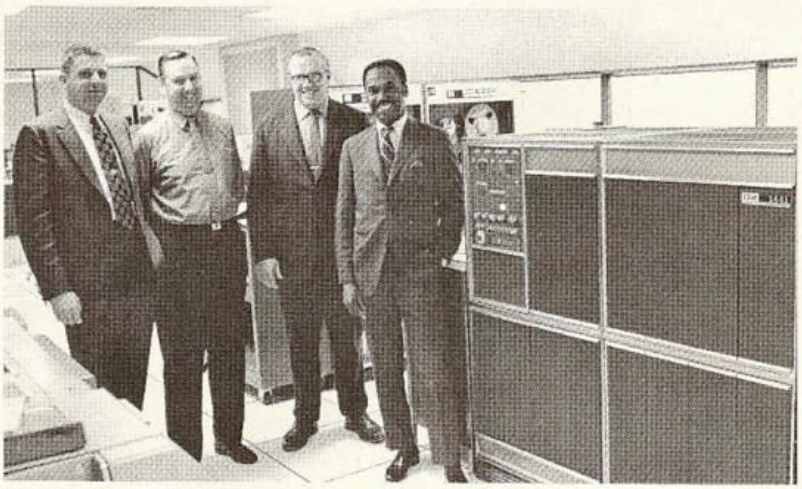
To Marketing Representative Nicholas B. Mason and Associate Marketing Representative Carl H. Dreyer, the two other IBM salesmen on the account, the spirit of the second generation of computers is strictly historical. When the 1401 was announced, Mason was a 14-year-old high school student in Portland, Me., and Dreyer was a freshman at the University of California in Los Angeles.

Today, the three 1401s in the Time data center (all purchased) produce 27 million pieces of promotion literature and invoices every year; and churn out thousands of food distribution reports for a subsidiary, Selling-Areas Marketing Inc., which sells the reports to food manufacturers.

A Nod To Nostalgia

For his part, O'Reilly has no feelings of nostalgia about the 1401—except for the sparkle that comes to his eyes when he trades tales with Donaghue, Walton, or Don H. Halenza, director of data processing at Time —all of whom worked together in the yesteryear of the early Sixties.

Perhaps Don Halenza pays the 1401 computer its greatest compliment. "People simply don't believe," he says, "how few problems we've had. It has been a great machine." ■



Portrait of the oldest operating 1401 and its original crew: From left, Don H. Halenza, director of data processing at Time Inc., Subscription Services Division; Donald J. Donaghue, manager of Time's data center; IBM salesman Robert E. O'Reilly; and Monroe C. Walton, the original operator on the 1401, now assistant programming manager at Time.