

### **The Teleequipment Footnote**

Although Howard Vollum had great hopes that the Sony/Tek move would bring the company eventual technology benefits, from Beaverton's perspective the reasons for the joint venture were primarily market-related. Even the Pentrix acquisition earlier in 1964 was the result of market forces indicating that Tektronix

must move into spectrum analyzers. The fact that these two steps worked out very well for the company tended to color Beaverton's perception of the ease with which it might take on new ventures. Tek dominated the high-quality oscilloscope market so completely, enjoying such a high reputation for technical innovation, that the air around the Beaverton campus had become one less of unbounded optimism than of overconfidence. Indeed, Earl Wantland was shocked when he returned from his European tour of duty to find lunchtime conversation in the executive dining facilities of the newly completed Building 50 dominated by talk of private planes and helicopters, rather than the challenges which lay before the company.

The success of 1964, in the acquisition of Pentrix and the achievement of Sony/Tek, led indirectly to the acquisition of a third company two years later. This experience, however, was far less successful than either of the first two, and it behooves us to depart slightly from our chronology to take up the case of Telequipment Ltd., for by contrasting it directly to Pentrix and Sony/Tek, we can avail ourselves of the valuable lessons this episode left in its wake. As noted, both Pentrix and Sony/Tek were essentially market-driven decisions: the former to gain control of a niche in the oscilloscope business, the latter to continue control over a geographic region. With their completion, Tektronix could view with satisfaction the global marketing scene. Indeed, there was no geographic market in which Tektronix was not the dominant force. Yet there was one sector of the oscilloscope industry where the name Tektronix was not to be found: in low-end oscilloscopes favored by individual users, secondary schools and colleges, and technicians whose work did not require the sophistication of the regular Tek scope.

Here was a market segment which had eluded Beaverton, and here was an opportunity for the company. So thought



*Bob Groom*

Don Alvey, who was acquainted with several British engineers who had started their own company, Telequipment Ltd. of Haringay, and who by the mid-sixties had carved out a nice little business, manufacturing simple, uncomplicated, inexpensive oscilloscopes whose performance recommended them to customers less demanding than those who bought from Tektronix.

Three men, Jack Coomber, J.C. Copps, and Bob Groom, founded Telequipment in 1952. Of the three founders, Groom was the engineering force who made the company work. Guided by the idea that low cost did not have to mean low quality, Groom established, in Vollum's words, "an excellent reputation [for Telequipment as] an innovator and has offered overall value not given by other manufacturers in the field."

Telequipment did not compete with Tektronix, and therefore did not attract anything more than casual attention from the Oregon company. One person who was more interested in Telequipment, however, was Don Alvey, who, as head of International Marketing, saw possibilities for the company in penetrating the low-end market:

*For what must have been the third*

*time, I saw the company chasing a low-end scope line at which we'd never succeeded ... That was no stigma on Beaverton engineering. It probably heaped on praise that they only knew one way to design the thing and that was right, and everything in it. They knew no way of engineering down to a price, because that would sacrifice some performance, and that's a compromise. And Tektronix would not compromise. At the same time, the company had never made a nickel, in fact it clearly lost its price, tackling that bottom end. And the bottom end was growing very well worldwide.*

*I knew Telequipment people from my previous experience in the UK and I came up with the suggestion that if we don't get the thing priced right we shouldn't make it at all ... If we stay out of the low-end market, the one company that is going to have an absolute bonanza dropped in its lap is Telequipment. I said I think they're the only company that I know, at that time, who really had a good, good quality compromise between price and performance. Why don't we buy them and let them do it and we can give them all the help — and I wasn't thinking of swarming the place with Tek engineers as much as we had facilities that they didn't have that would just make life a lot easier for them.*

And so on November 28, 1966, Howard Vollum announced the acquisition of Telequipment Ltd.

Things seemed to go badly from the start. Not that the people could not get along; that was not it at all. Groom and company had the respect of Vollum and his troops, and, moreover, Beaverton let the Harringay outfit continue to run with a very high degree of autonomy. Nor was it a problem with the Telequipment line, per se, for Telequipment scopes sold well,

and with the Tektronix reputation to back them up, they sold better. Alvey was correct; there was a significant low-end market, and now that Tektronix had Telequipment, Beaverton was in a position to control all three points in the market: the high end, the middle, and the low end. So what went wrong?

Essentially, the Telequipment experience was a precise case study of the tensions between marketing and engineering in a high-tech company, for there was trouble in both elements of Tek's treatment of Telequipment. First, there was never a clear consensus about how the company would market the Telequipment line. This began with confusion over whether the new line would carry the Tektronix logo and "bug", or whether the Telequipment logo would continue. A decision was reached that the scopes would continue under the Telequipment logo. But advertising, manuals, and warranties included clear statements indicating that Telequipment was a subsidiary of Tektronix, Inc., in the hope that this would indicate that the company stood behind the product and that name association with Tektronix would be good for Telequipment sales.

This second point, that Telequipment could bask in the glow of Tektronix, was a serious error in judgment, for it had precisely the opposite effect. Given the association of Tektronix with Telequipment scopes, Beaverton soon found that customers had vastly elevated expectations of what the Telequipment scope could do. Inflated expectations were in part also stimulated by an unfortunate tendency to perform at, or just below, stated specifications, which caused Beaverton embarrassment, particularly in Australia, where several of the company's least understanding customers were to be found.

But these were minor points in comparison to the difficulties experienced by the company at the hands of distributors and field engineers who were asked to sell

instruments from both the Tektronix line and the Telequipment line. There were some distributors who refused to handle the Telequipment line altogether. There was never any question that the Japanese would keep the TQ line out, since they had domestic companies producing low-end scopes of equal or superior performance. In the developing world, TQ scopes did well, competing successfully with the low-end Japanese instruments. In Britain, Germany, and Italy, the line did well, whereas in France it did not do particularly well. France, like Japan, had its own domestic instrument industry which, while it could not compete with Tektronix, could — and did — compete successfully with low-cost imports.

Wherever the sales representative worked on commission, the Telequipment line was at a disadvantage against the Tektronix line, since it behooved the salesperson to push the Tektronix scope, for which the commission was much larger. Given its higher performance, the Tek scope generally “sold itself” any time it was compared side-by-side with a Telequipment scope, although the customer may not have needed an instrument with more than a modest capacity. This was especially the case in the U.S., where the TQ line simply never got up any momentum due to the sales resistance of Tek’s field force. This sales problem was never solved by Alvey and his lieutenant, Frank Doyle. The latter has gone so far as to accept personally much of the responsibility for the failure of the Telequipment experience, pointing to his managerial role between the two companies. This is unfair, both to himself and to the facts, for while there were things which Doyle perhaps might have done differently, it was Alvey’s job to chart a more aggressive marketing strategy. Yet even this was not the major factor behind Tek’s inability to make the Telequipment experiment work, for the key was in engineering.

The reader will recall that when Vollum contemplated the Sony/Tek joint venture, he hoped for some “rub-off” in technology which would benefit Tektronix.



*Bill Walker*

No such “rub-off” was expected out of the Telequipment move. Rather, the conditions under which the acquisition took place gave Telequipment the right to continue to engineer products in England. Bob Groom was what some of the oldtimers around Tek used to call a “fair country engineer.” With his no-frills style, Groom no doubt saw himself as standing squarely within the Tektronix tradition, given his emphasis on engineering over management. A good engineer, Groom’s heart was not in management. But he was all Telequipment had, and tension grew between the strong-willed Groom and Beaverton over who would do the engineering in the company and where it would take place. Now this tension involved three people, all of whom saw themselves personally involved: Bob Groom himself, Don Alvey, and the man who was by the end of the sixties the chief engineer of Tektronix, Bill Walker.

Behind the personable, “aw shucks” Missouri exterior of Bill Walker lay a tough-minded managing engineer, whose credibility with his engineering colleagues was matched by his abilities to pull off complex organizational changes. The proponent of Tek’s integrated-circuit program in the late sixties, Walker was also one of the chief movers behind both the Display

Devices Division of Tektronix and the divisionalization of the late seventies and eighties. Bill Walker was a force to be reckoned with in the company. He was committed to quality products, but he was also committed to a centralized engineering capacity for Tektronix. By the late sixties there were perhaps sound reasons for pushing a centralized engineering effort, for during the explosive years between 1958 and 1968 the company had often duplicated research efforts several times over. It was nevertheless difficult for many of the veteran engineers around the company to accept such consolidation, and some, including Ropiequet, DeLord, Moulton, Kobbe, Oliver Dalton, the leading engineer in Tek's portable oscilloscope department, and others ultimately left. This was basically an internal struggle, but it spilled over into the relations between Tektronix and Telequipment.

While the Japanese venture staked out engineering territory of its own, Walker felt it unwise for the company to consider any other engineering outside the Tualatin Valley, and not just in England, but in Heerenveen as well. To make matters worse, Groom was quite vocal in his opposition to Walker's policy. And there was little that Groom had not already thought of or worked on and he delighted in confronting Walker with his inventiveness. "Every time Walker would say, 'How do you feel about doing so and so?' Bob would reach under his desk and say, 'It is done.' And he'd thought about it," lamented a key onlooker. "In other words, most of the things which people were doing around here [Tektronix], Bob at some time or other had thought about." This did little to endear Groom to Walker, who, by the early seventies, was fully committed to reducing Tek's divided and redundant engineering efforts in research and development.

Ironically, the struggle between Tektronix and Telequipment was fought out in the Management Group between Walker and Alvey, Groom's champion in Beaverton. Between Walker and Alvey the

issue was clearly divided: Walker opposed two engineering efforts, arguing further that the Telequipment line was cheap and inferior; Alvey on the other hand argued that every user had to start somewhere and that if they started with the company's low-end instruments, they would migrate up the line as they became more sophisticated. In the end, Walker won. His claim that it was impossible to make a high-quality low-end scope turned out to be true, but not because it was impossible to engineer such an instrument. There was too great a bias against it in a company which literally could not conceive of a no-frills instrument, much less stoop to make one. While Alvey had a technical background, he had no credentials in engineering, and thus the field of battle was left entirely to Walker, for the struggle was fought out among the company's leading engineering lights, including Vollum himself.

Lacking support from Beaverton for independent engineering efforts in England, Telequipment was sentenced to producing instruments of limited range and therefore limited appeal. The specifications for Telequipment instruments were set in Beaverton; Groom and company were left to engineer to those specifications, not beyond. Thus, the Telequipment line declined in popularity, despite the introduction in 1976 of a superior 30-megahertz scope, until in 1978 Beaverton reached the decision to terminate the Telequipment line altogether. The step was taken in early 1979, and Telequipment was simply folded into Tektronix, with Beaverton retaining the rights to the Telequipment name and trademarks. Both Doyle and Mallinson recalled that the negotiations surrounding the end of Telequipment were among the most difficult assignments in their experience with the company.

In a company such as Tektronix, technology is king, and engineering is mid-wife to the birth of new technology. Thus, in technologically driven companies engi-

neering considerations carry disproportionate weight in any policy debate. Yet the Telequipment chapter showed clearly the limitations of the primacy of engineering, for here engineering was allowed to overcome good sense. The reader will note, however, that it was not engineering in the technical sense which rode roughshod over Telequipment, but the management considerations of engineering. That is an important distinction to bear in mind. When legitimate engineering considerations prevail in questions of technical merit, as in the case of cathode-ray-tube development or, as we shall soon see, in the case of the Series 7000 oscilloscopes, much is gained. But when engineering is invoked to silence very real questions of management, market, or sound business practice, this represents a misplaced appeal to the necessary precedence which engineering must have in a technically driven company.