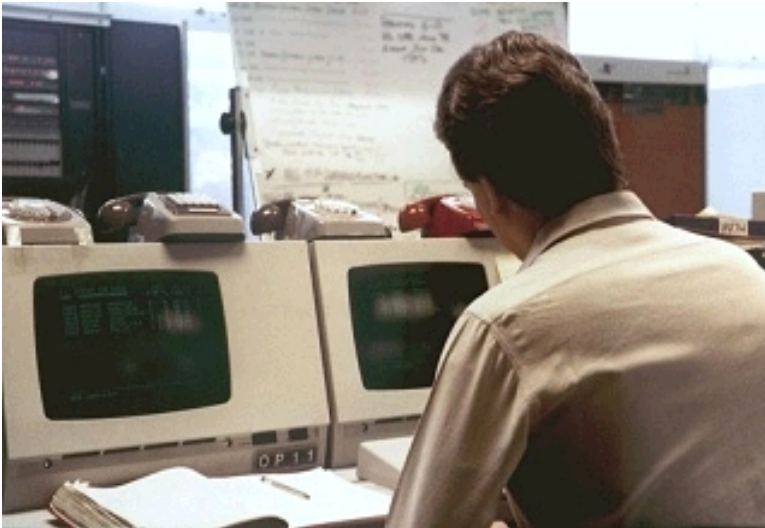


The ICL 2900 Series

The ICL 2900 Series was the next generation of machine after the 1900 series. It featured more powerful hardware, nice orange cabinets, and real VDUs instead of a teletype. I consider it the single most beautiful computer I've ever used, and although I haven't seen one for 14 years, I often still have vivid dreams about it. The processor was microcoded and could therefore change its instruction set. Our 2946 machine had a split personality; it ran two systems at the same time. One of them was an operating system called [VME/B](#) (Virtual Machine Environment). This was a phenomenal system for its time. It was a multi-user virtual memory system with advanced filestore, full security features and networking. The thought that it probably doesn't exist anymore anywhere in the world breaks my heart. If you know different, please contact me. The other system was DME (Direct Machine Environment) which was more-or-less the 1900 Executive ported to the 2900. It ran George 2 and used a green screen console. The peripherals could be switched between the systems by using software commands.



Pictured on the left is the operating station. Originally delivered with a 2960 machine, this *oper* as it was called was kept, but the processor and peripherals were frequently upgraded. Here it can be seen being used with a 2946 system (circa 1982). It had two character based green screens and a gorgeous keyboard. In all my dealings with computers over the last 23 years, I have yet to encounter a more beautifully made keyboard than this. Unfortunately, I never took a really good photo of it. Just above the left screen there's a black box with red LEDs on the front. This SAC (Store Access Controller) was great fun to watch. If you learned to read the lights, you could tell what the machine was doing. If the lights stopped, it was time to panic.

On the right is a row of EDS200 disk drives. Each of these washing machine sized drives carried a single removable disk pack. The disk pack was about 16 inches in diameter, about 9 inches tall, and fairly heavy. It could hold 200MB of data. I shudder to think how much one of these packs must have cost. The disk had to be lowered into



the drive, and screwed down using the top handle. As a trainee, I once misaligned a pack so that it was skewed on the spindle. The disk drive refused to spin up and we had to call out an engineer to get the pack off. I remember the look on his face as he tried to unscrew the thing with all surfaces exposed to the air. My name was 'shit' for a long time after that.

On the right is a wide view taken from the top of an EDS200 drive. That's me in the background, when I was a young chap. In front of me, there's a row of EDS60s.



On the left is a long shot across the machine room. At the front left is the edge of a huge punched card reader. At the front right, some EDS200 disk drives, behind those, the 2946 DME console, and behind that, the SAC.

The Line Printer

Printed output hasn't changed much since then, just the size of the printers. The line printer we used was the size of a small car. It was one of the most impressive machines I've ever seen. It was robust, quite fast, and compared to the tape decks, it was very reliable. The printing mechanism consisted of a rotating chain of characters mounted behind a wide ribbon on a very precision-engineered steel block. The characters would rotate into position, and hammers would come forward from behind the paper to print chosen characters on the line. The head would continue rotating until other characters were in position, and more hammers would come forward. After several repeats of this, one line would be finished. The clever thing was that the characters were so arranged on the drum that it could perform this cycle about 25 times a *second*. I'm still astonished

that it ever worked at all. Today we think laser printers are clever, but they're nothing compared to the ingenuity that went into ICL's big orange LP1500.

To be continued...

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