

# David Lawrence Access Summary

## **00:00:00 Introduction**

David Franklin Lawrence. Born 4<sup>th</sup> August 1936. Grew up in Morden, Surrey, at the southern end of the Northern Line.

## **00:01:06 Education: part one**

Went to a local school, passed the eleven plus exam and went to Rutlish, which was an old grammar school. Enjoyed school and did well. Couldn't afford to go to university and was eligible for national service, so his uncle who was a Navy captain suggested to send David to sea. His uncle paid for him to train as a radio officer in the Navy. This was his first experience of a technical education. Stayed until conscription ended in 1960 where he left as he had gotten married.

## **00:02:50 Working at Mullards in Mitcham**

At the time he joined, they were making magnetic cores for computer memory which were driven by valves. Responsible for testing the memory cores.

## **00:03:58 Education: part two**

Mullards paid for him to get an HNC in Wimbledon Tech. Electric trains were his main hobby. By age fifteen he had rewound his transformer for the train. Always interested in technology. Going to radio school confirmed his interests. Also sent on a radar course which introduced him to the concept of pulse networks.

## **00:05:17 Working for Fylingdales**

Job advertised at the Radio Corporation of America to work at Fylingdales. They owned two 790s. Fylingdales was part of the Ballistic Missile Early Warning System which were on the Whitby Moors. The ariels were in large golf balls that could be seen on the horizon. Employed by the Radio Corporation of America but the site was run by the Royal Air Forces.

## **00:07:19 Fylingdales IBM 790 Courses**

Biggest computers in the world at the time. Never really worked on the computers as they were only allowed five minutes downtime at any one moment. Received excellent training on the course. Machines got so hot they were cooled by air conditioning run by truck engines. 790s were used to track missiles if they found one. The computer could also see the moon so sometimes they received false alarms from the 790s thinking the moon was a missile.

### **00:08:44 Leaving Fylingdales**

Found working there boring as once he had learnt what he needed to do, there was very little opportunity to work on the machines. The newspaper would advertise technology job opportunities on a Thursday so on the night shift as there was nothing to do, David looked through the newspaper and saw an opportunity at DEC. David was in Whitby whilst DEC was in Reading, so him and his wife relocated, which they were enthusiastic about.

### **00:09:45 Applying to work for DEC: part one**

At the time, DEC made magnetic memory testers, which is what the job was for. David was one of the only people in the country with lots of experience in working with core memories. He was interviewed by Geoff Shingles. To get from Whitby to Reading he was paid a shilling a mile for up to 250 miles. David was also offered a job for Plessey, but they did not offer travel compensation like DEC did, so he rejected them. The interview was in a building above a furniture shop in central Reading. After his sixth months training in the United States, DEC had proper premises further out in Reading.

### **00:13:03 Training in the United States: part one**

Their memory testers were run on PDP-8, so David had to be trained in how to use these. About sixth months after joining the company, DEC decided to leave the memory tester business as they were not making enough money. David was glad he got trained in working with PDP-8s.

### **00:14:07 Applying to work for DEC: part two**

Met Geoff Shingles and Ken Senior. They took him out for lunch and asked him technical questions which David was good at answering. They were nice and David got on well with them. He felt confident after the interview. Cannot recall the interior of the office as most of the interview was done at a pub. Ken was the field service manager for all of Europe for PDP 6 and 10s at the time.

### **00:15:59 Moving offices**

DEC moved from the office above a furniture shop to a small factory. They did some assembly, but it was mostly for the salespeople to be. There was also a small amount of computer manufacturing.

### **00:16:42 Talking about time in the United States**

David had spent lots of time in the United States as a merchant seaman. He recalls that he was made to feel welcome everywhere he went. People would remark that he spoke good English, and he had to explain that he was from England. He first visited in 1955.

### **00:17:50 Training in the United States: part two**

Training was in a classroom. He had to learn how to use the PDP-8 on a formalised course as they were supplying it to customers. The course was very official and had homework. To learn about the memory testers, David worked on the production line doing the final check of them. This was in Massachusetts which could be very hot, and Ken Olsen did not believe in air conditioning. The classroom learning for the PDP-8 was given by specialists. Dress code was a shirt and tie. Some notable people on the course were John Barrett, Ken Parker and Chris Morris. They shared accommodation in a motel. They were given a car to share between two people. They were paid \$7 a day for allowance and a three-course meal were \$1 so it was good money. Most people did not spend any money and just relied on their allowance.

### **00:22:03 Shipping the last memory tester**

David went to France with another man to install DEC's last memory tester for a well-known company, he did not mention the name. The man with David had helped built the memory tester in the United States. David remembered him as his badge number was 007. The salesperson had taken the order for things that were technically impossible. The transistors that drove the tester were not capable of what the customer wanted so they could not meet the specs needed.

### **00:23:27 Outcome of the last memory tester**

The customer rejected the machine. David recalled how the French did not like Americans much at this time. The company hired a German engineer to help but he did not understand Ohm's Law so was not helpful. To import into France, the company providing the goods had to pay and would be reimbursed when the goods were accepted but as it was rejected, they were never compensated.

### **00:24:51 Working on PDP-8**

Had some early success at Harwell with noticing a problem that had caused a machine to fail. Worked as a support engineer across Europe for the PDP-8s.

### **00:25:56 How much DEC was earning**

When David joined, they were earning about a million pounds annually and by the second year it was around four or five million pounds. Saw big success in Germany, France, Italy, and Scandinavia.

### **00:26:48 Field service managers**

The big success in Europe meant David travelled a lot. There was a field service manager in the United Kingdom and another in mainland Europe which was Ken Senior. The manager for the United Kingdom was fired for breaking the law in the United States by failing to report that he had been to prison, once immigration found out he was removed. David liked the new field manager that was appointed in the United Kingdom but recalled that he was not very technical.

#### **00:28:05 Support work in France**

David did not enjoy having to visit France as it was serviced very poorly by Pitfield Services. He had to visit France quite often and as he was married and having children, he was not very happy about having to travel so much. He noted that although France and other countries had their own support engineers, the French branch were not very useful as they would not leave the office early enough to go out and mend machines. He was happier when his work moved more into Germany and Scandinavia

#### **00:29:50 Becoming a field service branch manager**

David spent eleven years in Reading where he had risen to be a senior support engineer. DEC eventually opened branches across the rest of the United Kingdom. The first field service office opened in Ealing which was in commutable distance from Reading. David took the job of field service branch manager for London which started him on the path of being a manager rather than a technician. He was still called on for things he had specialised in like drums and displays. David enjoyed being hands on and working with the machines but understood that as a manager he would be doing less of it.

#### **00:32:25 Becoming managing director of Scotland**

IBM and HP Instruments were in Scotland, so DEC also opened a factory in Scotland. It was opened by an American, but they wanted a British person to run it. Geoff Shingles likely put David's name forward. He was interviewed by various managing manufacturers. Did not have technical interviews, it was more about if he was a suitable person. He never had any manufacturing training. Ken Olson believed that each country should use its own people as in Germany, the field service manager and salespeople were all German. This is likely why David was chosen for Scotland rather than the American who opened it.

#### **00:34:43 Evolution of the Scottish factory**

It started off as a small factory built by the Scottish Development Authority (SDA) but eventually became a bigger factory that employed around 3000 people.

#### **00:35:13 What the factory did**

The factory was for the final assembly and test plan. All the equipment were sent to the factory, assembled, checked, and then shipped to the customers. DEC saw the United

Kingdom as a valuable customer so always believed that they needed a factory there. By the end of DEC, around 10% of all volume was bought and shipped in the United Kingdom. Shipped from Ayr in Scotland. David later became responsible for factories in France and Germany as well.

### **00:36:55 Factories in Ireland**

Galway was the biggest factory. It had module lines, assembly lines, and also had a software site where it was printed, developed and packed. There was also a factory in Clonmel. The factories were in Ireland for tax purposes as Ireland was a tax haven. David became responsible for final assembly of test parts and software parts.

### **00:38:15 Factories in Germany**

They made disks which David was not responsible for as he described it as being a very separate type of technology from everything else.

### **00:38:32 Queensferry factory**

David described this as a disaster. They believed they could make chips but never produced any saleable chips. David liaised with the United Kingdom government and negotiated a large sum of money but was not responsible for the actual factory. The plant cost one billion dollars.

### **00:39:48 Size of manufacturing operations**

Around 3000 people in Ayr. 500 people in Germany making disks. 400-500 people in France making terminals but David is not sure if many were made. In terms of physical size, Ireland and the United Kingdom were the biggest. The factory in Scotland was almost 300,000 square feet, Galway was bigger than this. Clonmel was a smaller factory. David estimated that there was 3000-4000 people in Galway but there were also other parts of the factory, so it was likely nearer 5000 people.

### **00:41:50 Visting Europe and the United States**

Spent most of his time in airplanes visiting Europe and the United States. He liked visiting Europe as he was very much his own boss. David was almost continuously on a European tour and visited the United States around four to five times a year. By this time, they had started a European hub based in Geneva which is where David's boss was located.

### **00:43:33 Meeting Ken Olson**

David believes that out of all the people in Europe apart from Geoff Shingles, he met him the most. The first time he met him, he was with a customer who had a Link-8 which was the scientific version of the PDP-8. The customer was a university student who complained that the Link-8 was not working. David was in the Reading office and

had only been there for around two years. Ken rang the office looking for the designer of the Link-8.

#### **00:45:22 Hosting Ken Olson in Europe**

Ken came on a tour of Europe and David hosted him by putting him on airplanes and sitting with him. David recalls that he was amazing and very smart as anything he spoke about with him, Ken knew more, but not in an overbearing way.

#### **00:46:14 Board meeting in Ayr**

Ken visited the factory several times and hosted a full board meeting there once. All the owners such as Georges Deriot attended. Anecdote about Ed Schwartz arriving at the airport and hitting someone's car with his trolley and a Scottish man shouting at him. David was trying to calm everyone down.

#### **00:48:06 Ken Olson and his wife**

Anecdote about collecting Ken and his wife from Glasgow airport and driving them to Ayr. She said she had a photograph of Robert Burns which David was suspicious of as he did not believe there were any photos of him. Afterwards, Ken praised how David handled the situation.

#### **00:49:32 Hierarchy among senior employees**

Although David was in a senior position in the company, he saw the engineers as the people at the top. They were the top of a hierarchy with field offices and field operations. If anyone wanted anything special done, such as introducing a new product, they would have to arrange a meeting with them. Ken held a manager meeting every month where people would go to make major proposals. David found these meetings intimidating as the directors would go and they did not care what they said whereas the normal managers had to be careful and well prepared. David felt protected by Ken in these meetings and believed he diverted difficult questions away from him.

#### **00:52:39 About the company directors**

They were all multimillionaires and included people who Ken had borrowed money from to start DEC in the first place, this meant it was never really his company. Nobody could beat him in his knowledge of technology because when he left, the company declined.

#### **00:53:24 Pierre Carlo Falotti and Manheim**

Final European manager, as well as a wheeler-dealer, which he got prosecuted for. He bought Manheim, a German electrical engineering company and tried to join it to DEC. David was responsible for the integration which was beyond him as Pierre had never gotten the buy in of the engineers in the United States. The German engineers were

confused at why the Americans were not cooperating. The German products needed to be adopted by a product line engineer in the United States, which never happened, so the integration was not possible.

#### **00:56:48 DEC's engineering culture**

Referred to as matrix management. Worked if people were willing to be in the 'matrix' but the rich and powerful just wanted to abide by their own rules. David did not see himself as part of this as he was British, and this culture was based in the United States.

#### **00:58:21 DEC culture of doing right by the customer**

Culture of doing the right thing by the customer, seen as the DEC way. It was like this in the first 10-15 years. As the company got bigger and richer, it turned into a more financially based company. In the beginning, Ken would say if someone needed to be fired it was the employers' fault for hiring them in the first place and would get upset at management for firing people. This stopped around 1985. David praised the principles of the company and credits this to it becoming such a popular and well-known company. He summarised Ken's philosophy as people being responsible for what they did.

#### **01:01:06 David's personal responsibility in Ayr**

People rarely told what to do, especially senior management. It was up to David what relationship the Ayr plant had with customers in the United Kingdom. They built facilities to meet with customers as they were always anxious to come to a plant. David was not a professional manufacturing manager so sometimes customers would know more about the manufacturing side than he did.

#### **01:03:01 Supporting the community in Ayr**

Gave them computers as gifts, as well as providing them with jobs. If the local technical college recommended students, the Ayr factory would try to hire them. Man called Professor Newell at Dundee University spent his whole life trying to get computers for the disabled, he had been given a Queen's medal for it. David became friendly with him, DEC had a product that no one had bought, it was able to translate a voice into another accent which was ideal for disabled people who could not talk. The Queen Mother opened a wing for him at Dundee University and David was invited to this as he had helped him. Lots of other instances of him helping universities. He was on the board for Paisley University and partly on the Board for Dundee University.

#### **01:05:50 Management's response to David helping the community**

As senior employees were not told what to do and had to take their own initiative, David was completely independent in his decisions to help universities and the wider

community, which he enjoyed. Even though he spent a lot of money on this, in management meetings when he reported what he had done, David always got praised.

### **01:06:49 The company changing by the 1990s**

Money began getting tight in the late 1980s, but it did not drastically change until the mid-1990s. David gave an example of how DEC's fortune changed, as the employees used to fly business class, but they then had to fly economy.

### **01:10:06 The downfall of DEC**

To an extent, the company ran on good will. Some jobs were not defined, and people just did them as extra things out of kindness. New DEC CEO Robert Palmer began to discipline people which led them to stop doing this and they only did what their job description was. David was glad to get out of the company by this point. Robert got rid of the head of manufacturing who had been there since the beginning and was appointed by Ken. He was replaced by the person who got David his manufacturing management job. Subsequent layoffs meant people were frightened to lose their jobs. David estimated that 20 senior managers were laid off for no reason. People were being hired for a million dollars in the United Kingdom. It was very chaotic. David also accredited some of the downfall to Ken not having a proper successor.

### **01:13:35 Leaving DEC in 1995**

David's friend who oversaw manufacturing offered him redundancy. DEC was under pressure and did not need the European managers anymore. His friend made sure he had a pension. His friend would not say anything negative about what was happening behind the scenes, but a few weeks after David's redundancy, he was fired himself. He could not believe how he had been treated.

### **01:16:05 DEC's legacy**

Believed people who worked for DEC and went on to manage other companies would have wanted to recreate the early atmosphere that DEC had. Emphasis on the belief of people doing what they thought was best and not to be scared or ashamed. From the few who David knew moved into other jobs, they have all since passed away.

### **01:17:25 Best personal memory working for DEC**

Being able to work with universities and being treated by heads of universities as somebody important with something to offer them. David was very proud of the work he did for the universities and for working for DEC in general. The pride in DEC came from the trust he received and recalled how everybody was trusted. Anecdote about sending the cleaner in the Ayr plant to the United States under the premise of him learning about their cleaning techniques, which was just an excuse to reward him. It cost the company around £1000 but it was the sort of thing that the company did. David tried to treat



people how he wanted to be treated, and he was never let down until the last six months.