

The Whittle Story

A Live Book

Ruth Whittle's Speech at AO Dinner – An Incredible Journey

By Ruth Whittle, April 20, 2018

Greetings to friends, old and new, as we celebrate this new milestone in the history of the Whittle Mining Software.

I was privileged to be part of it from the beginning and would like to share with you some memories of the early days.

Let us go back to the year 1984.

Jeff and I had been married for 30 years and we were now aged in our mid-fifties. During the 23 years that we had been living in Australia, Jeff had changed his career from Physics to Computing and was finally working as an independent consultant under the company name "Whittle Programming".

For the past 4 years, he had been working on a long-term contract at the Melbourne office of Newmont Australia, providing software support to their mining systems.

One day, Jeff explained to me how the mining industry would love to use the Lerchs-Grossmann algorithm for the design of open pits. Everyone said it was too hard to program and Newmont was not prepared to take the financial risk. Fired up by such a challenge and with 20 years of programming under his belt, Jeff felt sure he could do it, maybe as a private venture.

With just one child still living at home and near the end of his schooling, I was starting to have some time on my hands. I figured that Jeff had supported me all those years as a full-time mother to our six children, and it was now my turn to support him with his “brain-children”.

It did not take long to decide. I said: “Yes, and I will come in with you,” having no idea of what that might involve.

We converted the fifth bedroom on the ground floor of our North Balwyn home into an office. Jeff took time off and worked on a newly acquired IBM PC which cost us \$13,000. It had one megabyte of memory and a twenty-megabyte hard drive.

Within a month, Jeff had completed writing the software, in FORTRAN. We named it the “Whittle Programming Lerchs-Grossmann Package for Pit Optimization” (L-G for short).

To my surprise, I learned that I would be writing the Instruction Manual. I bought a book on how to write documentation and, with the help of some notes from Jeff, produced the first manual.

However, it is one thing to write a clever program, but, if nobody knows about it, it might as well not exist. Since Jeff had returned to work for an income, this was obviously going to be my job.

With an arts background and an honours degree in French, I knew nothing at all about the mining industry, let alone marketing. The latter, in fact, proved to be quite an asset. As far as I was concerned, there were no rules, so there was nothing I could not do. I could, and did, try many things.

But now I needed to rectify the first problem.

Mining is a world-wide activity. So, in September 1985, armed with an international mining directory, borrowed from Newmont, I dispatched a flyer to the “The Chief Mining Engineer” of every significant company listed that might benefit from using our software, which was priced at US\$5,000.

After mailing out these flyers, we installed a telephone answering machine in the house, in case anyone from the other side of the world called in the middle of the night. And we waited for the phone to ring.

Although the flood of enquiries we had hoped for did not eventuate, we were satisfied that the word had now been spread world-wide. Indeed, I subsequently exchanged correspondence with some of them directly.

Most of these companies were clearly clustered in North America, so we took the view that our future lay in that part of the world. In hindsight, the directory was an American publication, but it turned out to be a good decision anyway.

Some tertiary institutions were interested, but they did not expect to pay the full price. We thought it would be a good idea to have a rising generation of mining engineers going into the

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industry, familiar with these new concepts. We offered the package for US\$100 for teaching purposes only, and it was duly taken up by several universities in North America.

Our first commercial sale came out of the blue from a company named APIRSA in Seville, Spain. The order just appeared in the mail. We photographed the cheque before banking it and despatched the software with a receipted invoice. Then the two of us went out for a splendid lunch at Burnham Beeches, in the Dandenong Ranges.

As word spread, we gradually began to make further sales. Since the program was designed to interface with any generalised mining package, companies such as Datamine, Surpac, Micromine, etc could offer L-G to their existing customers, thereby acting as our sales agents, whilst WP provided software support.

Meanwhile, Jeff returned to work at Newmont's office in Melbourne. We had given the first copy of L-G to Newmont who used it at their Telfer Mine in Western Australia. In return, we were able to report results achieved by running the program in a real situation which was invaluable. Wherever possible, I used this information in my editorial and Press Releases, giving us credibility.

In October 1986, Chris Alford, Systems Engineer at Newmont and Jeff co-authored and presented a paper at the AusIMM Large Open Pit Mining Conference. It was entitled "Application of Lerchs-Grossmann Pit Optimization to the design of Open Pit Mines" and data was based on actual results of the program being run at the New Celebration Mine in WA.

On a visit to Telfer, Jeff saw that the software, which was suitable for the design of a mine with a short life (2-3 years), was being run many times over, with varying parameters, to take account of changes in economic factors over time. He explained to me how he could simplify such a procedure by writing another program to execute it in a single run - and thus avoid having piles of paper on the floor.

In conversation, the term "fourth dimension" came up. I suggested that we call the proposed new program "Four-D" and go back and rename the previous one "Three-D". These names are now firmly embedded in the history of mining technology. Shortly after its completion, and contrary to Jeff's advice, I secretly submitted Four-D for an award. When it was proclaimed "1987 Software Product of the Year", Jeff was delighted to accept the dinner invitation and receive, not only our first trophy, but the recognition of his peers. I also quietly won a few brownie points and, thereafter, Jeff largely stopped telling me what to do.

As we began to generate a steady income from the sales of the software, Jeff began working at home full-time and, when our youngest son had finished his schooling, we began to travel overseas, mainly in North America. We would exhibit at mining shows, APCOM and other conferences, and Jeff would often run a seminar or present a technical paper. In this way, we met many people face-to-face in the mining industry, and I also made friends with the publishers of many international mining magazines.

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Each sale of Four-D meant that Jeff had to travel to any place in the world to install the software on site and train the staff. Our overseas trips to major events several times a year were also quite demanding, and after six years of this, Jeff eventually grew weary of travel. The task of installation and training was given to Norm Hanson and it was agreed that I would go on marketing trips without Jeff.

Being familiar with the concepts, I could talk about the software to a certain level. Today I suppose you would call it "layspeak". However, I needed backup, so I would take one of the technical people along. One year, Philippa, our Secretary, observed that I had been overseas that year with every male member of staff, except Jeff!

At this time, countries in South America, with their long mining tradition, were recovering from internal political turbulence and I could see great potential for our software there. I began to study Spanish at home, then spent a month at an International Language School in Mexico. I grew to really love South America.

By the mid-nineties, with help of Austrade, we were regularly exhibiting at EXPOMIN in Santiago, Chile, reputedly the world's biggest mining show which occurred every two years. On the alternate years, we ran our own conferences in Perth, known as "Optimizing with Whittle". This attracted a regular number of international presenters and attendees who soon dubbed it "The Whittle Confest" - because they had such a good time.

By stages, back in Melbourne, we had taken over the top floor of our house as office space to accommodate more staff, including our son David who became our Business Manager. We moved to rented commercial office space, first in North Balwyn within walking distance of our home, then, two years later, in Box Hill, opposite the Town Hall.

By the year 1997, we had ten people working in the office, and we had sold five million dollars-worth of software in 55 countries.

Other Whittle software siblings appeared, variously called Four-X, Opticut and Milawa.

Prober was on the horizon, and later it became the main tool of Whittle Consulting, with our son Gerald at the helm.

Inevitably, things were changing.

At the turn of the century, after 15 incredible years of helping them grow, I felt that Jeff's "brain-children" had now come of age.

It was high time for me to move on and let them make their own way in the world.

To read Ruth's bio please scroll to the next page..

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Ruth Whittle BA

Ruth has an honours degree in French from the University of London.

Her first job was as Executive Officer in the Ministry of Supply in London, then in administration at AERE, Harwell (Atomic Energy Research Establishment).

After marrying Jeff in 1954, she devoted herself full-time to raising their six children, five sons and a daughter.

The family moved from England to Melbourne, Australia, in 1961.

When Jeff and Ruth established Whittle Programming in 1984, she successfully undertook the marketing of the software.

Since her retirement in 2000, Ruth has maintained a keen interest in the continuing development of the Whittle software.

She is currently working on compiling a history of the Whittle software by means of a Live Book.

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