Colin Austin's story

In the early seventies engineer Colin Austin realised that computers would revolutionise the design process. He wrote a piece of software that transformed the international design of plastics moulds using scientific principles rather than 'gut feel'. So successful was this software that the company that Colin founded (Moldflow) became the most successful exportesr of technical software in Australia, a multi-million dollar company selling in over 48 countries throughout the world.

Colin became internationally recognised as the leader in his field of computational fluid flow and the company world famous for a series of innovations which sprung from Colin concepts of how to manage research, a process he calls 'speculative research' pursuing unconventional approaches on the hunch they may just work out, high risk with many failures but the one success could literally change the world.

He became increasingly concerned about environmental issues, particularly the management of what he sees as the world's most critical resource fresh water. He examined the research programs around the world, saw they were largely financed by Governments, what he calls 'competence research', highly organised and planned but almost over organised, killing of those high risk - high reward creative ideas.

Colin felt that with his expertise in fluid flow simulation and armed with the technique of 'speculative research' that he may just be able to change the way we think and manage our water.

He sold his multi million dollar company which gave him the resources to set up a research group of some dozen highly talented and creative researchers to tackle those high risk projects which was being ignored by the ever cautious bureaucratic approaches of Governments.

At first his group focused on irrigated agriculture with a number of innovations such as the development of micro flood irrigation which unlike conventional flood irrigation can apply precise quantities of water and replaces the traditional open channels which lead to major losses of water by evaporation and leakage.

He continued his software development with scheduling software which enables precise application of water by calculating plant water usage.

While important technologies Colin was getting frustrated by the limited horizons of the bureaucracy who encouraged wasteful usage patterns by making cheap water readily available at highly subsidized prices. However his life was about to change when he was invited by World Vision to go to Africa to see if he could work out a way that local people could grew sustenance food in the periodic droughts which cause so much hardship.

Stunned by the cultural shock of meeting malnutrition first hand he began to analyse the heart of the problem. Before leaving Australia he assumed that the problem was simply no rain, but he quickly learned that this was not true. The core problem was erratic rain. People simply cannot live where there is no rain. Populations grow where there is an average adequate ran and are then thrown into despair when the rain fails to materialize.

He felt the situation was just like Australia, no one complains about the lack of rain in the Simpson desert, there is no one their to complain. The problems arise in areas like Perth and South East Queensland where there is on average adequate rain which encourages a high population which becomes threatened when the rain fails to materialize.

He was introduced to the reality of the green drought, when there is enough rain for the crops to start to grow. But a break in the rains, even of a few weeks, but at the critical times when the seed heads should be maturing, means the crop fails completely, resulting in famine.

Realising the problem was erratic rain, rather than no rain; he developed a system called the wicking bed which is essentially an underground pond. Rain, when it occurs, is channeled into this pond which forms a reservoir which allows the plants to keep on growing to maturity even if the rains fail to materialize.

Having experienced the realities of living without proper water supply, seeing people scooping water from feaces infected puddles, experiencing first hand the inevitable consequence of diarrhea Colin was in for a second cultural shock on his return to Australia.

With his eyes opened to a new way of thinking about water, he was hit in the face by the stupidity of the way we manage water in Australia. How we rely on dams which only fill in freak weather conditions to supply the bulk of water. Then how we use that unreliable but valuable water in the most bizarre way when there is plenty of water available literally falling from the sky, free of charge, right on the doorstep. After his experiences in Africa he found it unbelievable that people use high quality potable water for flushing toilets and watering gardens when the simple techniques he had used in Africa, catching water locally and storing it in tanks or in the underground ponds or wicking beds, provides a simple and cheap substitute for potable water.

Colin was stunned not just by the lack of interest from the bureaucracy, but their obsession in pushing ahead with totally unnecessary projects like the Mary River dam, an attitude which he finds difficult to divorce from the revenues arising from the monopoly distribution of water by the Government. He now feels that the only solution is to get this message out to the public at large.

Awards

He has received numerous awards including;-

1980 John Derham Award for Technical Innovation
awarded to Colin Austin

1982 National Small Business Award

1983 Governor of Victoria, Export Award

1984 Governor of Victoria, Export Award

1984 Dept of Trade in Association with Confederation of
Australian Industry's Export Award for outstanding
achievement.

1985 AITA, Cad software solution of the year award

1988 Australian Bicentennial Export Award, Services Category

1989 Australian British Chamber of Commerce
Federal Award for small business export initiative and
innovation

1990 Governor of Victoria Export Award to Colin Austin for

significant export achievement by an individual

1990 Government of Victoria Export Award Certificate of Commendation, services category

1990 Business Bulletin Small Business Achievement Award

1990 Business Bulletin small business achievement award

1991 The John Hart Technology Award

1991 Rolls Royce/Qantas award together with the Warren Centre award for engineering excellence

1991 Governor of Victoria Export Award, awarded for significant achievement by an export product

1993 AITA Exporter of the year award

1993 ANTEC (USA) best technical paper award for lean plastics manufacture

1994 Southern Cross Award for Excellence awarded by Technology in Government Committee

1997 Fred O.Conley Award for outstanding achievement in plastics enginnering &technology

2002 Triannual Plastics Indutry Award for contributions to the plastics industry

2002 SPE Environmental Award

2002 SaveWater award winner agricultural section

2003 SaveWater award Regional Sustainability

Publications

Publication	Date	Theme
Intelligent Irrigation	1996	Closed loop control of irrigation
The Murray Darling Basin A Technological Solution	1997	Replacing flood irrigation
Soil Moisture Interpretation Made Easy	1997	Guide to soil moisture
Agriflow Making water go further	1999	Replacing flood irrigation
Vision for the Bush	2000	Managing our natural resources
Irrigation Scheduling	2000	Guide to scheduling
Water Right The new thinking on irrigation scheduling	2001	Adaptive scheduling
Sensor based irrigation scheduling	2002	Training course
Reaping the benefits of water saving technology	2002	Implementation of water saving technology
Water, technology and policy interactions	2002	Water policy
Myths and fantasies of sustainable food production in Australia	2003	Critique of DNRE
Irrigation scheduling	2003	Scheduling manual
Making the most of water Micro flood operating manual	2003	Micro flood user guide
Water, Wit and Wisdom- The search for the solution to the water crisis	2004	Book ISBN 06463814-X
Solving the water crisis	2005	DVD