

## THE MEGAWAVE

by Colin Falconer

Douglas J. Trewarthur, an American, and possibly the richest person I was ever likely to meet, leant back in his seat and laughed out loud.

'Three quarters of a million! You're kidding! Look son, if you were halfway presentable I might continue this discussion. But take a look at yourself. God! Those clothes aren't only twenty years out of date, they're dirty enough to have their own eco-system.'

We were seated in the resplendent dining room of the Dorchester Hotel in London, and Trewarthur's outburst bought a few surreptitious glances from several of the other diners.

I had to admit the well-worn clothes, bushy beard, and over-long hair, looked totally out of place in this pristine setting. However, it had taken me six months of correspondence with the shipping magnate's staff to arrange this meeting, and I wasn't going to quit without a fight.

'I'm sorry you don't like my clothes,' I said defiantly, 'but I thought a man of your experience would be more interested in doubling his fortune than worrying about how I dress?'

I steeled myself, waiting on the anticipated rejection which would signal an end to our meeting.

Instead, the Yank's smile slowly faded.

'That's a pretty big statement Son.' He leant forward to fix me with an unwavering stare. 'Okay! You've got twenty minutes. Tell me why I should invest in this...' he hesitated, hunting for the word.

'Megawave' I prompted.

'Yeh, Megawave. What the hell is this thing anyway?'

I took a deep breath, leant back in the honey-brown upholstered chair, and began explaining why I desperately needed the money:

'Four years ago, the marketing division of Able meats, one of Australia's largest meat exporters, determined there was an untapped

market in value-added products. You know what I mean; instead of simply selling meat carcasses, they'd pre-cook and package them, giving a massive increase in profitability and hopefully opening a whole new marketplace for their products.

The problem they encountered was, how do you cook these carcasses in high enough volume for the anticipated demand? This is where I became involved.

By profession I'm a consultant engineer and, having had some experience in this field, I was contracted by Able to develop a method for cooking these carcasses.

It took me less than an hour of research to realise that the problem couldn't be handled in a conventional manner. You see: if it takes a minimum of four hours to cook a side of beef in a commercial oven, it would need an oven over a mile long to cook the number of carcasses they anticipated selling. So, that was when I started looking at unconventional methods of achieving the goal.'

Trewarthur seemed to be listening, so I continued.

'I initially thought of a giant microwave. However this seemed impractical for one very good reason, namely: microwaved meat doesn't look or taste the same as when it's roasted.

For six months I drafted plans which involved conveyor lines and high temperature blowers, but none of them really came close to meeting the demands Management required.

By the end of the six months the company's executives were starting to get a bit testy about the delays, and truthfully, I was beginning to believe the only solution was to sub-contract the work out to a number of smaller meat processors. It was then I read an article in a trade magazine. A company in America had developed a microwave which, they claimed, gave the same results as a conventional oven, but at twenty times the speed.'

Trewarthur nodded, his way of indicating he was paying attention.

'I contacted the company and began negotiations on co-developing a commercial version of this oven.

I don't want to bog you down with the technological side of this invention, but I need to explain that the basis for their success was: Instead of using the established method of utilising a magnatron to generate short, high-frequency radio waves, they used a newly designed electron tube and solid-state oscillators to control the frequencies. This shifted the waves through a series of pre-programmed bandwidths. The nett result of this was, the meat was cooked evenly throughout, and even an expert couldn't tell the difference in taste from normal roasting.

Anyway, a year ago we were on-schedule to complete the prototype, which we had named the Megawave. To save costs and to ensure that no single company knew the technology which had gone into this project, we had various components manufactured by different companies: Toshiba made the generator, the control section was produced by Philips, and several smaller components were farmed out to subcontractors.

It was at this point that everything seemed to go wrong: firstly, the inventor, Sam Goldberg, disappeared. When I say he disappeared, I mean that absolutely no one, not even his family or the police, knew what had happened to him. I've got my own theories, but I'll tell you about them later. Anyway, because he had borrowed heavily to develop the Megawave, his creditors moved in and sold off his factory, including all the tools and componentry. This effectively meant the only working model of his invention, if I could assemble all the components, was in my hands.

The second problem was, the bloody thing wouldn't work, or to be precise, didn't work as we'd expected.'

I paused as a waiter sidled up to take our orders. Trewarthur, obviously annoyed at the interruption, simply pointed at our glasses and said 'Again.' Effectively re-ordering our drinks and dismissing the waiter with a single word.

'Go on.'

'The company had given me two assistants. I won't bore you with their names or descriptions, only to say that I had nicknamed them Hopeless and Useless.

On the day of the first trial the pair helped me put a dozen sides of beef into the machine. I'd better explain at this point that the machine looked somewhat like a giant room, the only difference being, this room had ceramic pedestals on which the meat was placed, and the control console was housed in a separate booth. The entire cooking process viewed by closed circuit cameras.

Anyway, we closed the door and, with due solemnity, I pressed the button which started the Megawave. Useless and Hopeless were watching the room on the monitor. The next thing I knew they were doubled up in convulsions, not of pain, but of laughter. Tears ran down their faces, they gasped for air, they rolled about on the floor, and they pointed repeatedly at the monitor, unable to speak through fits of hysterical laughter.

Although I understand it now, at the time I couldn't believe my eyes. The dozen sides of beef had vanished. This in itself was strange enough but, when we switched the microwave off, the meat reappeared.

I cautiously entered the room and sure enough the meat was all there. What was more annoying was, the bloody things weren't one degree warmer than before the operation.

Over the next week I tried various settings, but on every occasion I had the same results, the meat would vanish from the monitor. Eventually I arrived at the conclusion that the electro-magnetic waves were somehow affecting the closed circuit video system.

Hopeless and Useless lived up to their names and were of absolutely no help in solving the machine's malfunctions. So, after a talk with their previous supervisor, I had them returned to their old jobs.

Alone, I tried different permutations on the settings, checked and rechecked the circuitry, and studied the circuit diagrams for hours on end.

The camera and monitor problem didn't disturb me; after all it wasn't really necessary to watch the meat cook. My primary concern was that despite hours of cooking, the meat wasn't any warmer than before the operation.

Management, who had given me a free hand up to this time, heard the rumours about my lack of progress, and I was given a final month to make the experimental model work or, as they phrased it, the project would be scrapped, and they'd have no further use of my services.

You can imagine the hours I poured into my work. By the last weekend I was frantic, I knew it should operate, after all, everything worked on paper, and Sam Goldberg had shown me the working bench model.

In desperation I decided to see, first-hand, what was happening inside the machine. I set the timer for thirty seconds, just enough time to get to the room's door and open it. I should point out that the silicon-diode rectifier had shown absolutely no presence of microwaves during any of the operations and I felt reasonably safe at attempting this experiment. I set the timer, ran to the room and opened the door. I remember cursing as the automatic cut-off on the door switched the machine down. Anyway, with the aid of a screwdriver, I neutralised the cut-off mechanism, left the door ajar and repeated the experiment.

Standing just inside the doorway I couldn't hear or see a thing happening. Maybe the machine had switched off too quickly? I went back to the console and set it for five minutes. Again I went into the room. The machine, apparently, wasn't working at all. The meat didn't disappear like it had on the monitor, it just sat there. The other strange thing was that the timer, even when I used longer and longer time settings, cut off the second I entered the room. I repeated and repeated the experiment during that final Sunday. When I watched the room on the monitor I could hear the

hum of the machine, see the sides of beef disappear, and watch them reappear. When I entered the room, nothing.

It was past midnight when I eventually switched the wretched thing off. I had an appointment with the managing director, Peter Kyle, at nine that morning and thought I should get a few hours sleep if I was going to put up a good argument for continuing the project.

I arrived with plenty of time to spare and decided to have a coffee in the executive canteen before braving the old man.

Thinking I'd better arrive a couple of minutes early, I finished my coffee and made my way to his office.

His personal secretary gave me an icy stare. 'You're late for your meeting.'

I glanced at my watch, it showed three minutes to nine, but I wasn't going to pick a fight with her.

'May I go in.' I asked politely.

She pressed the intercom and, after a brief conversation, I was ushered into the inner sanctum.

I ambled towards his desk, trying to evince an air of confidence, but before I had taken two steps toward him he burst into a tirade that left me speechless.

"Just who the hell do you think you are? When I say we've a meeting at nine o'clock Monday, I mean nine o'clock Monday, not eleven-thirty Tuesday. I suggest you pack your bags and leave. We'll post you any money you're due. Now, get the hell out of my sight."

I was flabbergasted, and tried to explain he'd got his days and times confused, but to no avail, he just got hotter and hotter under the collar and, choosing discretion as the better part of valor, I beat a timid retreat.

He was right of course, it was Tuesday and there was nothing wrong with his watch, it really was eleven-thirty.'

I looked straight at Trewarthur.

'You've most probably worked out what happened, but it took me several days and sleepless nights to accept what had occurred.

I initially thought the microwave might have affected my watch, or that it had given me some sort of amnesia. The answer, of course, whilst being hard to comprehend, is obvious.

Yes, the Megawave had worked, but not as designed. Maybe it was my inexperience in the field, maybe the sub-contracting of the componentry had something to do with it, whatever it was, the result was: An object placed in the room disappeared, or to be more precise, was broken down into molecules, the molecules reconstructing when the machine switched off. When I'd entered the room and appeared to see or hear nothing it was because I had been molecularised at the same time as the carcasses, when the machine automatically cut off, I became whole again as did the sides of beef. I therefore saw nothing of what was happening. I'd also, and here is the interesting part, stopped in time. When I had apparently spent a few seconds at a time in the room, in fact I had lost a total of twenty-six and a half hours, or rather, I had gained twenty-six and a half hours.

I won't bore you with my further research, but I will tell you that since this event, I've studied Organic Chemistry, and also read and re-read the works of physicists like Rutherford, Maxwell and Schrodinger. And I keep coming back to two papers. Max Planck, the German physicist, who wrote. "All molecules can vibrate, and all vibration frequencies should be possible." And Einstein, who said. "Space and time must be closely linked in a four-dimensional continuum where the normal three-space dimensions are augmented by an interrelated time dimension."

Mr. Trewarthur, I believe, given the finances, I can recreate the machine using the same Contractors and assembly. If I can, the potential is unlimited: in one fell swoop we have solved all the problems of cryogenics. Terminally ill people can be put into stasis until a future time when a cure might be found. All but extinct species can be saved for posterity. We may, because all electromagnetic waves, regardless of their

frequency, travel at the speed of light, have overcome the first hurdle in transporting people or objects across the seas or the universe. It could make our present transport methods obsolete.'

Trewarthur let out a low 'hmm.' I'd obviously hit a soft spot mentioning that his shipping empire could one day become as redundant as button up shoes.

'You can see why I believe Sam Goldberg's disappearance was tied with this phenomenon. All I need is \$750,000 to duplicate the Megawave. And for this I'm offering ten percent of the company.'

I paused for a second to add more emphasis to my closing statement.

'We both know its potential is unlimited. Believe me, I'm living proof it works.'

Doug Trewarthur studied the folder I passed him. It contained the schematics for the machine, some press cuttings of Sam Goldberg's mysterious disappearance, and several notebooks filled with my computations on Intermolecular Force, Quantum and Wave Theory. There were also detailed cost projections.

'I'll have my people look over this material.'

I reached across and retrieved the folder.

'I'm sorry Mr Trewarthur, but I can't let anyone else look at these notes. It's not that I don't trust you, but once these papers are out of my hands, I've nothing left to bargain with.'

Trewarthur stared at me for what felt like eternity.

'Sorry son, I won't give you the three-quarters of a million.'

My heart dropped, and my face must have reflected my disappointment.

The Yank smiled.

'But I will give you three million dollars for a fifty-one percent share of the company.'

Although stunned at the offer, it was my turn to refuse.

'This project could be worth a thousand times that amount.'

'True,' he replied, 'but how many millionaires do you know?'

We both knew he had me over a barrel.

I sat silently for a while, pondering the situation.

The waiter eventually broke the tension when he returned with our drinks. I downed my glass of bourbon in one hit, and made my offer.

'Maybe we can hit a compromise. You want controlling interest, and I want to make a realistic profit from this discovery. The only thing standing in our way is the money. Why don't you make me a sensible offer for the whole thing?'

Doug Trewarthur was a shrewd businessman and nobody's fool. He realised, at the least, this deal could nett him billions. He also knew the moment the project was operational he could raise any amount of capital by listing the company on the Stock Exchange.

He slowly picked up his glass and stared into its depth. You could tell he was weighing up every pro and con. Eventually he spoke.

'OK, my boy, but this is a take-it or leave-it offer. I'll give you forty million dollars for the whole kit and caboodle.' Before I could answer he continued. 'That's five million dollars now, and the balance when the machine is operating.'

Without saying a word I reached out and shook his hand. The deal was clinched.

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I was pleasantly surprised it only took a week for his lawyers to draw up the documents and release the five million.

It was then I suffered the same fate as Sam Goldberg, I disappeared.

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You wouldn't recognise me nowadays. I've shaved the beard, cut the hair, and wear Armani. And I've been busy: I sold a phony gold mine to a South African investor for three million dollars, a chunk of the Simpson Desert to a tourist development company for a sum even I'm embarrassed to mention, and flogged-off a map which purports to show the location of an

undiscovered Egyptian tomb, now that really was a bargain at only twenty-five thousand dollars.

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