

# Profile of Russell McMahon

## 1. What is your current occupation?

I'm a Professional Engineer / Electronic designer and consultant.

Most relevant in this context is that in late 2007 I won a then Innocentive challenge to add "Room lighting" to solar tasklights for use in developing countries, for US company Sunnight Solar.

That was followed by a design & consultancy role with the company, numerous visits to Chinese factories and 300,000+ lights being made.

## 2. What is your educational background?

I have a Masters Degree (ME) in electrical engineering from Auckland University. I completed a BE in 1973 and then went back after 4 years working to do the ME.

## 3. How did you learn of the challenge?

From an email from Wazoku.

## 4. What motivated you to respond to the challenge? Why did you want to help the IRC improve the facilities in their camps

I've been waiting for this opportunity to arrive :-). I did not know what it would look like in detail, but I wanted to use my experience and abilities to assist those most in need and most unable to escape the situations that they have found themselves in. I see this project as an extension of the opportunity that I had to be useful with my earlier solar lighting project. I have been looking at the possibility of pursuing several other projects of usefulness in similar areas, but this project instantly appealed as something that I very greatly wanted to do.

## 5. Approximately how much time did you invest in creating your response to the challenge? (this does not need to be a precise answer – you can state your answer in hours or days or weeks. It is simply to get a feel for the level of effort necessary to win).

Hard to put an accurate figure on it. Say several very solid man weeks plus many years of relevant prior experience. Total time from first awareness to final submission was about 27 days. I had other tasks to finish first.

The "challenge" was not in deciding IF I could do it but in producing a submission that I wanted to be compelling. I had to spend time on attempted "prettiness" and structure - and was very badly pressed for time at the end so it was "somewhat rough around the edges". In the last few days I was working well into the early hours on the report.

Apart from the report other aspects included:

- establishing the cost and availability of suitable components/subsystems & their technical abilities and requirements. I contacted a number of Chinese suppliers when available information was inadequate.
- Design of the energy aspects (solar panels, batteries, power budgets for lighting & radio & sensors) to get an adequate feel for how well these could be fitted into the budget.
- I made a simple but useful energy budget spreadsheet which allowed various scenarios to be rapidly compared.

All up with files I produced and relevant downloads re equipment etc I have about 450 related files on my computer system.

## **6. How did you feel when you found out that you were a winner?**

Relieved. Ecstatic. Surprised. Really really really pleased.

This has very little to do with the money - it is (of course) very useful BUT my overwhelming aim was to get involved. Which is happening :-).

## **7. Other**

- Married 49 years to Val.
- Two adult children
- Committed Christian (and very happy to interact and work with people of all beliefs and ethnicities)
- Obsessive photographer
- Too interested in too much in the world - "information is my hobby" :-)
- 30+ countries visited (so far).