

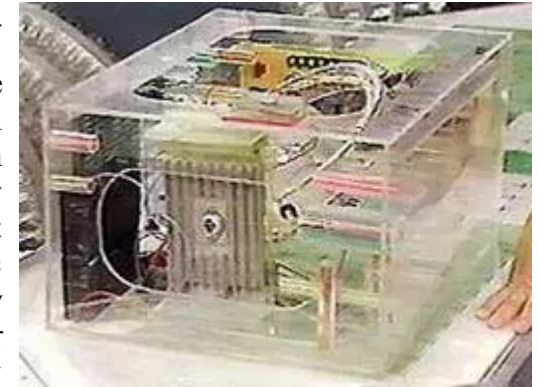
# Orac

In this project, I will be (re)building my own interpretation of the portable sentient supercomputer Orac from the 70's BBC sci-fi show [Blakes 7](#). I will be documenting the art-ideas, electronics, programming and multi-material construction techniques involved in the project, hopefully providing useful insights and techniques for students to use as a source of ideas and technique-samples. This will be particularly pertinent to students of the MEDAx02 subjects run on all three teaching levels (100, 200, 300) in semester 2 of each year at the DMC and over on main campus for students of other Creative Arts degree branches as the Arduino Microcontroller features strongly in these subjects. However anyone interested in working with electronics, acrylic plastics, light metals and found objects might find interest or use here.

## Introduction

*Right: ORAC image from a screen grab of the series. Used under copyright academic provisions.*

Orac was the sentient supercomputer from the 70's BBC TV series *Blakes 7*. It became a character in the final episode of the first season, and continued as a member of the 7 for the remaining three seasons which the show ran. Created by the self-exiled robotics genius Dr. Ensor (who also created the Tarriel cell - an instrumental part of all advanced computers in that time), Orac had the ability to tap the power of every Tarriel cell in existence via instantaneous tele-space link and use them for its own processing. This made it both the most powerful computer in the human galaxy, as well as - by necessity of function - unique. Orac inherited a number of its creator's personality traits and then added some of its own, making it generally belligerent and more interested in pursuing its own academic studies than in the general welfare of the other members of the 7. More than once it failed to inform the crew of impending danger as it was eager to study the source of that danger. However at other times it was instrumental in saving the crew by way of outsmarting and/or interfering with other computer systems via its tele-space link.



*Right: Orac on display at a sci-fi convention (Concussion, the 2006 [Eastercon](#))*

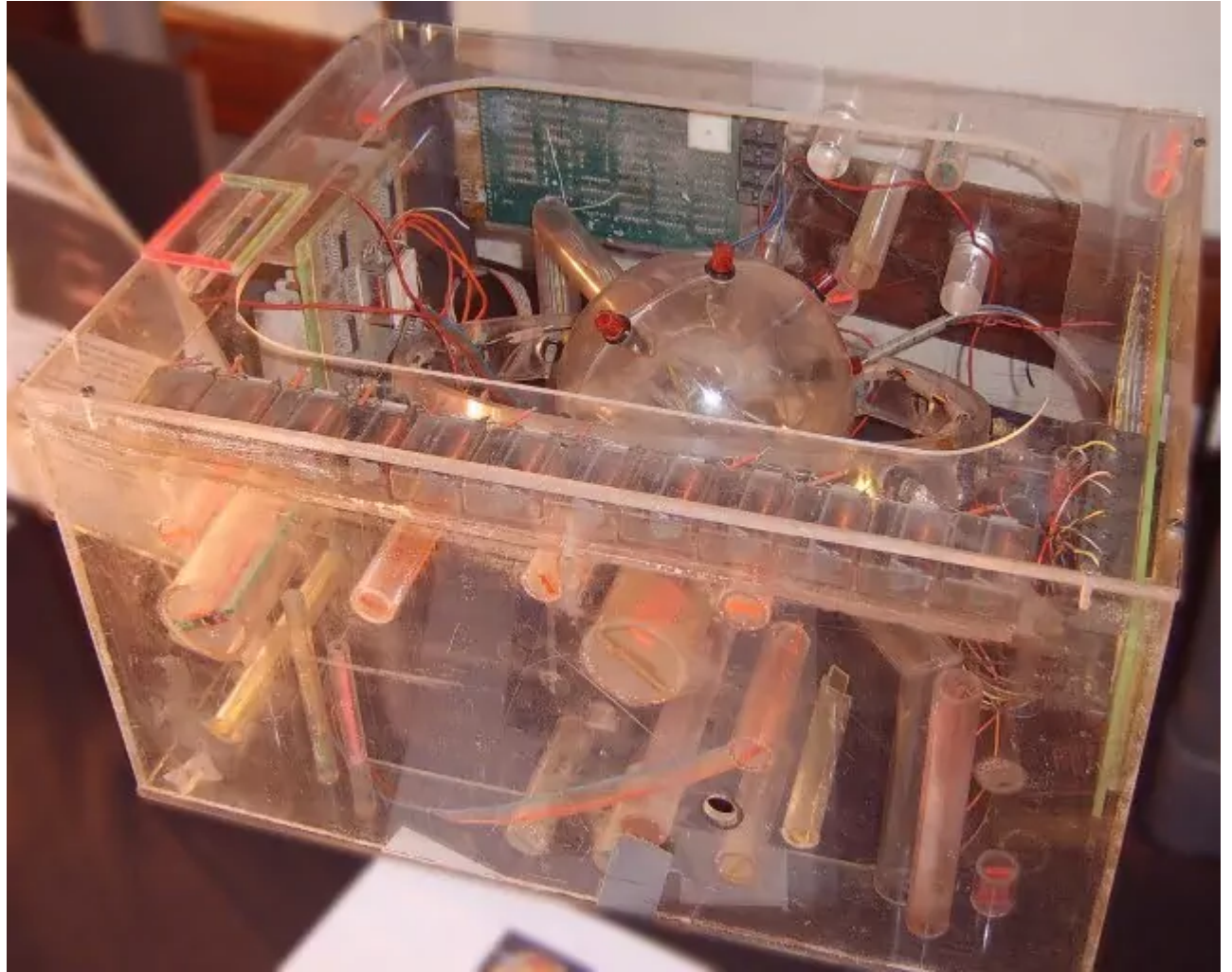
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As part of a Design-and-make project within the Science and Technology Teaching component of my Bachelor of Teaching, I created a model representing my own interpretation of the Orac device. It has identifiably similar appearance, however was not intended to be a replica of the original. Most significantly, I updated the incandescent lamps of the original to high-brightness LEDs. This was in the late 1990's (last century!).

Now I am going to strip down my previous model and rebuild it with 2010 technology. LEDs are much brighter, and I will be using an Arduino Microcontroller instead of the hard-wired logic driving the lighting on my first one. I will be re-using a lot of the original's parts, and adding in more high-tech-looking found objects as well - the first version was a little sparse inside the box for my liking.

*Left: My first ORAC*

**A note on build style:** Within the *Blakes 7* story, Orac was built in an exiled-genius' home laboratory, so being a bit rough around the edges is quite



appropriate. Over the series, Orac has been hauled about numerous alien worlds, pulled from an underground bunker that was in the process of being blown up, thrown about spaceships under attack, stolen and stolen back several times, and subject to much general abuse, so scratches and dings are also all good.

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