



The Realtime Group of Companies

3035 W 15<sup>th</sup> St. Plano, TX 75075

972-985-9100 (Main)

972-985-9150 (Fax)

[www.TheRealtimeGroup.com](http://www.TheRealtimeGroup.com)

## *Case Study – Organ Transport Product*

### **The Challenge:**

To create a device that can prolong and transport a human heart for transplant over an extended period of time. The device needs to be able to accommodate various-sized organs, as well as extend the window of organ viability for beyond the conventional 4 hours.

### **The Solution:**

The Realtime Group has designed the organ transport product, which in turn will save lives, lower overall medical costs, and improve the quality of life for thousands of transplant patients. This device is intended for use in the preservation of human heart during transportation from procurement (donor) to transplantation (recipient).

The device oxygenates the heart with cold (4-10 C) perfusion fluid using a peristaltic pump. The perfusate volume is adjustable to accommodate various-sized organs. Sensors monitor temperature, flow rate, and delivery pressure during transport. Vascular resistance is calculated and displayed on the Front Panel of the device along with the temperature, flow and pressure readings.

Research has indicated that the device has the potential to successfully extend the post-procurement healthy life of the heart for beyond a minimum of at least 4 hours. Utilizing current practice in the transplant field the heart has a practical life of only 4 to 6 hours using a commercial solution, sterile plastic containers, ice and ice chest



## The Realtime Group of Companies

3035 W 15<sup>th</sup> St. Plano, TX 75075

972-985-9100 (Main)

972-985-9150 (Fax)

[www.TheRealtimeGroup.com](http://www.TheRealtimeGroup.com)

### **To Learn More About this Product:**

The expanded time of organ viability available through using an organ transport system seeks to broaden the allowable time span and the geographic range between donor and recipient, thus effectively increasing size of the organ donor pool.

The Realtime Group is a leading medical & aerospace engineering & product development firm that has developed the organ transportation prototypes and engineering documentation required for FDA approval. The Realtime Group has been in the trenches of real-time life critical software systems and has helped to develop an impressive list of products. There is no better company to have as a partner than The Realtime Group.



THE REALTIME GROUP