Abstract
Coronary heart diseases (CHD) are one of the main causes of deaths in the United States. Although it is well known that CHD mainly occurs due to blocked arteries, many of the specifics of this disease are still subject to current research. It is commonly accepted that certain factors, such as a cholesterol high diet, increase the risk of coronary heart disease. As a consequence, people should be educated to adhere a diet low in low-density lipoprotein (LDL or bad cholesterol). In order for children to become familiar with these facts, educational, explorative computer systems can be employed to raise some awareness. This poster describes an educational computer system for children that serves this purpose. While practicing their navigation skills, the children can learn about the various types of blood cells and particles within the blood stream. A geometric model of the arterial vascular system of the heart has been developed, which considers vessels of different sizes. An interactive fly-through using a standard game controller facilitates the exploration of the interior structure of the vasculature. A blood flow simulation including several different particles within the blood stream allows the young explorer to understand their functionality. This system has been deployed as an interactive museum exhibit for children.

The primary age group addressed by the science museum where it is currently being displayed is 4-9 years. With proper guidance by the museum personnel and the instructional material provided at the exhibit the game is also suitable for slightly younger and much older children.

An Explorational Exhibit of a Pig’s Heart
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