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iStan®, THE HUMAN PATIENT SIMULATOR

The medical innovations area of *YOU!* The Experience showcases recent breakthroughs and trends that are changing the field of medicine and celebrates the innovative spirit and creativity that is needed to find solutions to today's health problems. A central focus to this area is a state-of-the-art Human Patient Simulator, named iStan (for "Standard Man"), and the Museum of Science and Industry is the first cultural institution in the world to have a simulation tool of this caliber on exhibit for public use.

This computer-controlled, full-sized mannequin is normally used to train medical and nursing students in a hospital setting, and it has also guest-starred on episodes of *ER* and *Grey's Anatomy*. In *YOU! The Experience*, guests of all ages will be able to use this amazing technology themselves to diagnose and treat highly realistic medical conditions.

Created by a company called METI®—and originally made for the U.S. Army—iStan is a first-of-its-kind simulator completely designed, from the inside out, around a human-like skeletal structure. Approximately six feet tall and weighing 154 pounds, iStan closely mimics the anatomical workings of the human body; his spine, neck, arms and hips all move with incredible life-like accuracy. iStan breathes, sweats, bleeds and cries and can recreate real medical scenarios such as an asthma attack or heart failure. He can be operated wirelessly, and he comes fully loaded with software programs, boasting an unsurpassed array of new, breakthrough features that take simulation training to a new and exciting level of realism.

Museum-goers are able to interact with iStan through a fun and immersive 25-minute facilitated experience, held at least twice every day. In these sessions, guests enter a laboratory space in the exhibit and meet with two Museum facilitators who play the roles of chief of medicine and an attending physician at "MSI Hospital." Each guest is given a role of a medical professional: cardiologist, pulmonary specialist, otolaryngologist, neurologist and hematologist. Each role is responsible for monitoring one of iStan's vital signs, including heart rate, respiratory rate, blood pressure, oxygen saturation level, breathing sounds and his general appearance. Guests also learn how to check for their own vital signs and are able to record them to take home.

After establishing iStan's baseline vitals, guests are then put to the test to diagnose iStan as he goes through a simulated medical emergency and his vital signs fluctuate. Guests will also have the opportunity to treat some of iStan's medical conditions. He can respond to oxygen treatments including CPR, real and simulated defibrillators, as well many different "virtual drugs" that are administered through his software program.

Student groups on field trips at the Museum can interact with iStan through the Museum's facilitated *ER/OR* Learning Lab. This hands-on program is geared for seventh- to ninth-grade students and helps them to explore medical careers and cutting-edge medical technologies by "training" as residents in the emergency room or the operating room. (See Education Programs document for further details.)

The Museum of Science and Industry gratefully acknowledges METI for the donation of iStan to the Museum. For more information on iStan, visit the METI Web site at www.meti.com.