

# Research complete on USBC Bowling Ball Motion Study

12/17/07

## USBC Equipment Specifications and Certification

**Results expected to be made public next spring**



The United States Bowling Congress has completed its pioneering two-year study of **bowling ball motion** and how advanced, high-tech equipment may influence lane conditions and scoring in the sport.

The USBC Bowling Ball Specifications Task Force - formed in 2005 and comprised of USBC research engineers and technical volunteers from several bowling ball manufacturing companies - is now analyzing the research data results. The task force plans to meet in February 2008 to discuss the data further. USBC expects to release complete research results to the public next spring.

The goal of the study is to better understand the motion of bowling balls using scientific research and data analysis. As the sport's national governing body, USBC undertook the research working cooperatively with bowling manufacturers.

One impetus for the study is that over the past 20 years, bowling's credibility has been compromised in part due to technological advancements that have greatly affected scoring in the sport.



"USBC is concerned that technology has overtaken player skill in determining success in the sport of bowling," said **USBC Technical Director Neil Stremmel**. "Now that the research phase is complete, the task force looks forward to further analysis and discussion prior to releasing the results to the public."

The testing process officially started in summer 2006 after the formation of the USBC Bowling Ball Specifications Task Force. That group has framed the research project, deciding which bowling ball layouts and lane oil patterns are to be used.

A total of 59 particle and reactive resin bowling balls were used for the research study being conducted in the USBC testing center in Greendale, Wis., which includes eight lanes in a climate-controlled building.

USBC's robotic ball thrower - nicknamed "Harry" - was used to roll the test balls. The data was measured using "Super C.A.T.S." (Computer Aided Tracking System) to record the velocity of the bowling balls as they were rolled down the lane. The Super C.A.T.S. system is made up of 23 small electronic sensors installed on the lanes.

USBC engineers and technicians have performed more than 150 tests and have conducted several hundred multiple linear regressions to analyze the data.

USBC is committed through that ball research to maintaining the highest standards for credibility and integrity for bowling. In fulfilling that pledge, USBC is launching a re-evaluation of all components of the System of Bowling, which includes lane surfaces, lane conditions, bowling balls and pins. USBC also has formed task forces to deal with issues and standardization of lane surfaces and lane conditioners/cleaners.

"The ultimate goal of USBC research is to strike a better balance between player skill and technology," Stremmel said.