Request for Proposal:
Cardio Fitness Equipment Metabolic Equivalent Validation Process

About FIT-C

Website: www.fit-c.org

The Fitness Industry Technology Council is a group of professionals representing leading companies/organizations in the fitness industry. The council seeks to grow the fitness industry, improve fitness user experience and mature the collection of real-time wellness data through the creation of interoperability standards for technology-based fitness devices.

Specifically, FIT-C was formed to address the following industry issues:
◦ Mobilize resources to drive the fitness industry forward
◦ Develop and promote technology standards for fitness equipment
◦ Protect the intellectual property of current and prospective participants
◦ Provide a means for all sectors of the fitness industry to participate

The members of FIT-C are working to create several important technology standards and certification programs for the fitness industry, including Caloric Burn Data and Fitness Data Exchange. This Request for Proposal relates to FIT-C's work on Caloric Burn Data.

Background

There have been many studies on the accuracy of different cardio equipment and their motion paths. FIT-C is looking to establish a quality metric based on metabolic equivalents (METS, or kcal/min). The population deserves to have the proper information about caloric burn presented to them, and with certification, the equipment will provide to the trainer, physician, nutritionist, insurer or employer a more accurate picture of the level of compliance to protocol of an individual. All too often side-by-side pieces of cardio equipment of the same functionality display different expended energy values for the identical workout. This is true within a specific brand with different console firmware codes. Fit-C is looking to normalize the playing field by providing a self-certification process for equipment vendors, which will generate documentation that will be reviewed by a qualified physiology lab for validation of process, and accuracy prior to certification.

Fit-C is requesting bids from qualified institutions and individuals to provide a validation process for any equipment that reports caloric burn. The process must be repeatable, easy to implement and scientifically accurate. The desired deliverables will be a set of guidelines and a process that outlines the documentation of the validation process for the specific equipment across both fit and unfit populations

with an age range from 12-80 years old. The deliverable will also have a justification for the methods and processes for the validation of the equipment.

The process outlined should take into consideration the time and money required for the equipment manufacturers to implement the validation. The justification should also include recommended accuracies for each motion path across the population (e.g. a treadmill should report within 10% the caloric burn across the population at speeds from .89 m/s to 4.47 m/s).

The resultant paper will consist of a justification for the recommendations, sample test data on one or more pieces of equipment and the recommended process for equipment manufacturers to follow for their equipment.

FIT-C will allow the institution and/or individual to publish their findings and will work with the institution in publishing the FIT-C guideline documents for industry certification.

Details for Submission

All submissions should include, at a minimum, the following pieces of information:

- Name and address of organization submitting the Proposal
- Contact information for the individuals in the organization responsible for the Proposal
- Executive Summary of why your organization is qualified for this work
- Detailed proposal on how you would approach this work
- Detailed timeline, with milestones, on when the pieces of the work would be delivered
- Cost

Please submit completed Proposals, and/or address any questions, to:

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