

The HP “Datastreamer” is Announced

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During recent HHC’s we have had low key discussions of a new “educational” product called the Datastreamer. This product was originally proposed/developed by Saltire. We first heard of Saltire when Brian Maguire presented the idea of a pen input for calculators at HHC 2003. This was based on previous work done by Saltire on software for the HP Expander and Casio Classpad 300.

Cyrille has talked to HHC attendees about modifying the code for the HP39gs and HP49gs to increase the speed of interfacing with the Datastreamer. We have seen it demonstrated at HHC 2006 and we were very impressed with the real time screen presentation of data from sensors connected to the Datastreamer. The real time low audio frequency speeds impressed everyone. After that presentation, however, the Datastreamer was put “on back burner.”

We have been wondering about the status of the Datastreamer and today, June 10th in Germany, HP has announced a completely redesigned (expanded it to be a four channel interface) Datastreamer. It has a new name – HP StreamSmart 400. You may see a data sheet on the HHC 2008 website or you may also get it from the HP website at:

http://www.hp.com/hpinfo/newsroom/press_kits/2008/connecting/ds_c_streamsmart400.pdf

The technical specifications are improved. Up to 5,700 samples per second may be collected. This means that a microphone may be used for speech and displayed on the screen.

The four channel input will greatly expand the educational aspect of demonstrating and exploring an incredible range of physical phenomena. I can imagine having one channel recording a 1,000 Hz. timing signal. One channel records the DC voltage on a start switch and another channel on a stop switch. The data to be measured is recorded on the fourth channel. From these four plots you may time the event.

The classical inclined plane measurements for determining “g” and sliding vs. rolling friction are obvious. Other imagined examples are measuring the swing of a pendulum, the measurement of PH in swimming pools, the heat given off during a chemical reaction, the time and duration your refrigerator operates, etc. The possibilities are endless.

The application limits (within the StreamSmart 400 specifications) are basically two.

- (1) Commercial sensors available from: <http://www.fourier-sys.com/>
- (2) The creativity of the user community at creating their own “sensors.”

The latter limit may be a sticky point with HP and the first question needing an answer is the input electrical specifications so sensors that are not available may be invented by the user. Can we assume that the interface box has been student proofed to protect the calculator?

I look forward to getting a StreamSmart 400 and I will have to change my Conference topic to discussing its applications. This is very exciting because the applications are endless. I just hope that compatible versions of the HP50g will eventually be available.

Another question is: What calculator serial numbers have the StreamSmart code necessary to use it on my HP 39/40gs?

Stay tuned.

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Richard