

Sales Script for GlobiLab

The Labdisc – iPad Solution

Introduction

Apple has long been the teachers' favorite when selecting a computing device. This was true with every generation of Mac computers and MacBook laptops due to the very intuitive MMI (man machine interface), seamlessly sharing user data across every MAC application. In addition the Mac Operating System (OS) Graphic User Interface (GUI) was always a few steps ahead of the great rival Microsoft. In contrast with Microsoft Windows, Mac hardly ever crashes and can run for weeks without the need for boot.

When the mobile landscape became revolutionized by the emergence of the "smart phone", it was a very natural step for Apple to introduce their stable, robust and aesthetic GUI OS to this market. The iOS was created, used by iPhone, iPad etc. and offering virtually the same functionality as the well loved Mac OS, except now with touch interface rather than a keyboard.

As everyone knows this changed the telecommunications playing field for good, pushing Windows Mobile and Symbian (Nokia OS for smart phones) out of the market. It took Samsung a number of years to come up with a quality smart phone running Android OS that could finally challenge the iOS monopoly.

At Globisens we believe that what iOS achieved in the telecom market, will soon be repeated in the education market, especially in the science arena. In education teachers need technology that delivers content. In science students need to visualize abstract concepts.

Today, there is no better platform for multimedia rich visualization than the iPad:




1. Small and lightweight – enabling activities in the classroom and outdoor mobility
2. High resolution and brightness – making it perfect for field trips
3. Long battery life – lasting a full school day (not the case with laptops)
4. Always-on and ever ready – saving teachers from lost time on crashes or boot-up
5. Multi-touch screen – simplifying use for kids who can't cope with a traditional keyboard
6. FIRST CHOICE – Kids and teachers will do just about anything to get one!

The Labdisc is fully compliant with the Apple concept. The simplest, easy-to-use lab, with long battery life, ever-ready (no boot up time or sensor calibration) and allowing a “clean”, cable free, wireless link to the iPad.

The GlobiLab analysis software is not just a subset of the GlobiLab PC version. GlobiLab was specifically designed to enhance the iPad education features and put them to best use in the learning environment! For example, with our GPS functionality we can plot any of the Labdisc sensors on Google Maps, delivering a unique and immediate experience of map zoom and pan using two fingers, rather than dragging a mouse. With multi-touch control users can change graph scale, or zoom to a line graph etc. The look and feel of the GlobiLab version replicates the iPad aesthetic, using the Meter GUI with colorful data display in variety of meter types. Together, the beauty and simplicity of the iPad application and the innovative science functionality of the Labdisc-iPad solution make the most cutting edge educational package available today. If, as research would indicate, it takes technology to attract kids to learn science, then this is a solution that will have students clamoring to do hands-on science! Needless to say, it throws the door wide open for early age science as well.

First communication between the Labdisc and iPad

When working with the Labdisc for the first time, you have to pair the Labdisc and your iPad.

1. On the Labdisc:
 - a. Press the *Scroll* key to launch the Labdisc menu
 - b. *Scroll* and *select* the Configuration  menu
 - c. In the configuration menu **scroll** and **select** the Bluetooth  icon
 - d. In the Bluetooth menu select “*BT pairing*”. The Labdisc will produce a long “beep” sound and switch to “*BT enabled*”.
2. On the iPad:
 - a. Launch the iPad *Setting* 
 - b. From the *General* menu, open *Bluetooth*. Make sure the iPad Bluetooth is on.
 - c. From the *Devices* list click the Labdisc XXXX where the XXXX digits match the last 4 digits of the Labdisc S/N sticker located on its back cover
 - d. The iPad will ask for a PIN code. Enter “1234” and click Pair.
 - e. The iPad will show Labdisc_XXXX connected

Pairing is done once and there is no need to pair the Labdisc with this iPad for any future communication.

Presenting the iPad Application

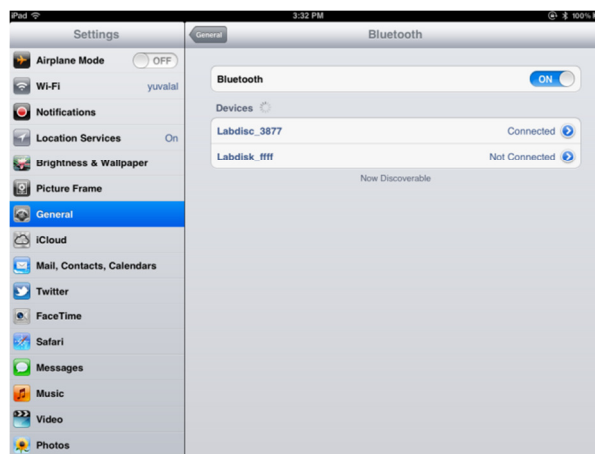
Say:

Easy to **set wireless communication** between the Labdisc and the iPad:

Demo steps:

- Go to iPad Setting- General - Bluetooth and select your Labdisc from the Devices list
- The iPad should immediately connect to your Labdisc and change its status to “connected”
- Close the Setting and open the GlobiLab software

Show:



Reading and understanding graphs is a critical part of statistical literacy, a key goal of global curriculums. But students, particularly at elementary school level find it hard to translate a concrete event to an abstract table or graph, not to mention understand concepts of scale. **GlobiLab makes it visual , starting with Meter view**

Demo steps:

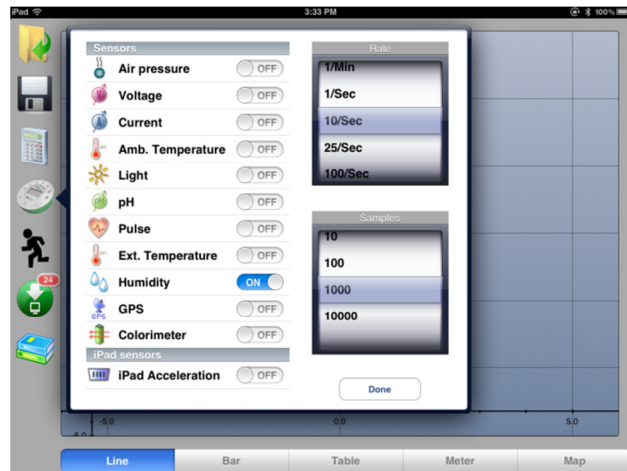
- Click the “Meter” key on the bottom of the screen
- Select one of the “1,2,4,6” options to change the number of meters shown
- Press and hold one meter and change the meter type: Analog, Vertical Bar, Horizontal Bar etc.
- Use the selection wheel to select a sensor for that meter



Setting up the Labdisc for sensor recording is done through a single dialog box.

Demo steps:

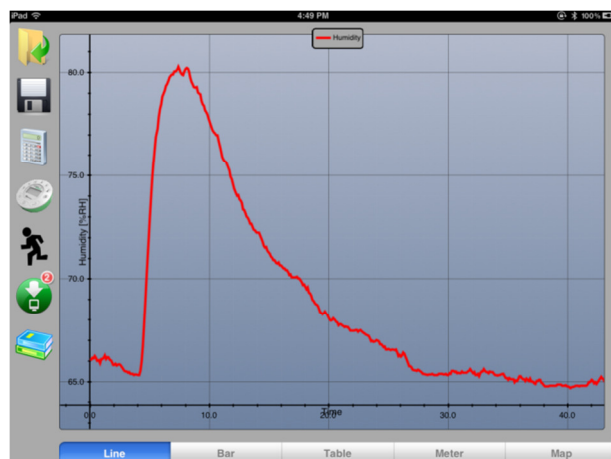
- Click the **SETUP** icon (looks like a Labdisc) in the left tool bar
- Here you can turn sensors on/off, select the sampling rate and the amount of samples
- Clarify the fact that we can choose from up to 14 built in sensors!
- Select Humidity, at a sampling rate of 10 samples per second and a total of 1000 samples



Just click on the **RUN** icon and relative humidity measurement stream will build as a line graph on the iPad.

Demo steps:

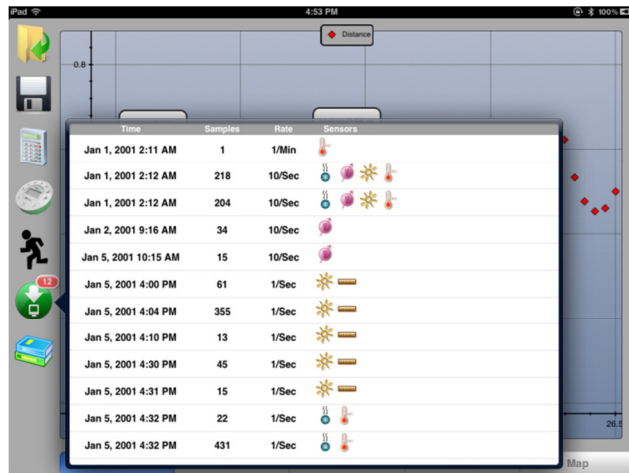
- Rotate the Labdisc plastic ring to expose the sensors
- Place your hand near the relative humidity sensor (located under the key with a symbol of 2 water drops)
- Observe the increase in the graph values
- Press the **STOP** icon to stop this experiment



The Labdisc can store up to 127 different experiments. This is very useful when conducting long measurements. We can **download Labdisc stored measurements to the iPad**

Demo steps:

- Click on the Green Download icon
- The iPad will list all Labdisc stored experiments. Each line on this list shows what sensors were recorded, at what sampling rates and for how many samples. In addition it indicates the date and time of the recording.
- Click on one of the lines in the list. The Labdisc transfers the data to the iPad.
- After all data is transferred, the iPad will show a graph of every collected measurement



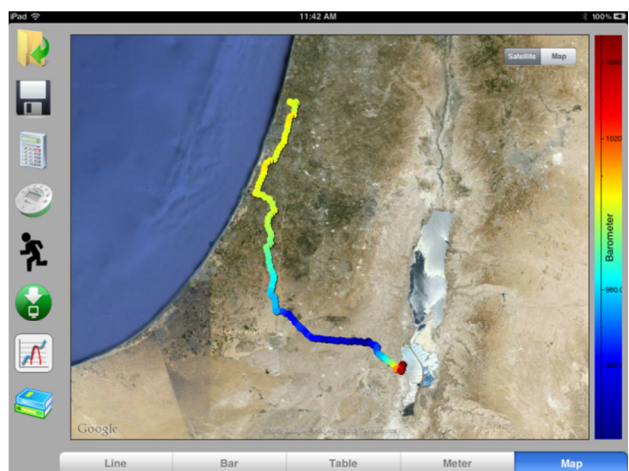
Mobility and long battery life are the keys to a successful field trip, the Labdisc delivers both, plus a unique GPS sensor.

The GlobiLab software “tells the scientific story” behind the field trip. This multi-disciplinary approach connects science, probes and geography. The map view links the data with the students’ real learning journey, bringing far more pedagogic value than a graph view could.

Demo steps:

- Remember to be connected to the Internet
- Click the Open icon and select the “Trip to the Dead Sea”
- Explain the Dead Sea’s unique nature

The Dead Sea is the lowest place on earth, 1,388 ft below



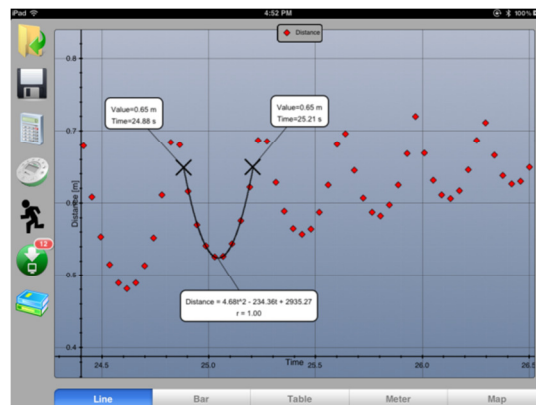
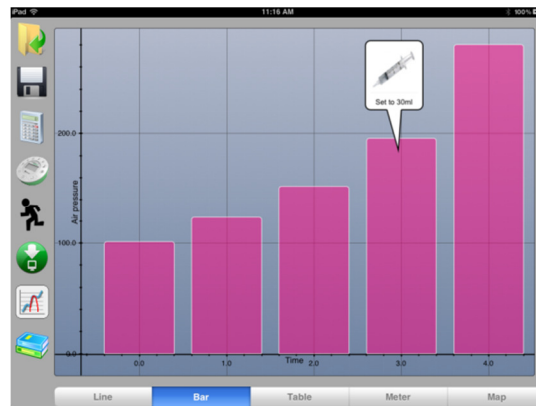
sea level. With 33.7% salinity it is also the saltiest body of water.

- Touch the color scale on the left and select the Barometer
- Touch the graph to show a marker with air pressure value. Point out how the color changes as the air pressure increased closer to the Dead Sea.
- Touch the color scale on the left and select humidity – show how the humidity decreased closer to the Dead Sea.
- Use multi-touch to Zoom the map
- You may show other experiments under this category like “Walk in the Park” or “Flight from Tel-Aviv to Istanbul”

Enabling students to tell the experiment story behind their data results, GlobiLab advanced markers and annotation functionality allows text and images to be added to specific points along the graph.

Demo steps:

- Explain the pedagogic benefit of markers and annotations: Markers attach to the graph line, automatically designating the present graph values at that point. Annotation is freely placed text and image set by the user that indicate a specific action, event or detail at any point on the graph. Similarly, annotations can be created on bar graphs.
- Use a long touch anywhere on the background (not on a graph), create an empty annotation. The edit annotation box opens



automatically. From here:

- Edit or write an annotation
- Add an image using the camera or the image gallery
- Remove the annotation
- Use a long touch on the graph to create a new marker that moves along the graph line
- Show how the markers can be moved along the graph, by just pressing, holding and dragging the marker tip
- Double click the graph to see the actual samples

A key K-12 science requirement is to understand representations of the same data in different formats.

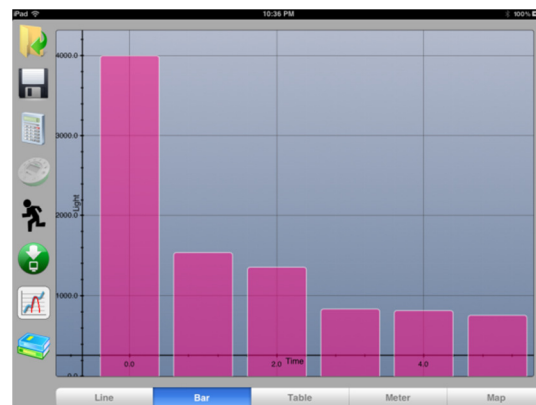
Demo steps:

- Ensure an Internet connection
- Click the *Open* icon and select the “*Trip to the Dead Sea*” and show the route on the map
- Click the table key at the bottom of the screen
- Show the different columns: Time, Barometer, Humidity and GPS data

	Time (s)	Barometer (mHg)	Humidity (%rel)	GPS latitude (°)	GPS longitude (°)	GPS speed (km/h)	GPS angle (°)
1	0	1001.1	53.6	---	---	0.0	0.0
2	60	1001.9	53.7	32°10'49.68"N	34°51'18.12"E	3.5	348.1
3	120	1001.3	53.5	32°10'49.50"N	34°51'17.94"E	0.1	348.1
4	180	1000.6	53.1	32°10'49.50"N	34°51'18.73"E	0.9	284.7
5	240	1001.4	52.8	32°10'49.62"N	34°51'18.73"E	0.0	284.7
6	300	1001.3	52.3	32°10'47.04"N	34°51'17.70"E	37.0	124.5
7	360	1000.8	51.7	32°10'39.29"N	34°51'40.03"E	45.1	106.2
8	420	1002.9	51.0	32°10'31.89"N	34°51'57.30"E	29.2	105.1
9	480	1001.9	50.5	32°10'27.54"N	34°52'15.54"E	39.2	104.4
10	540	1000.6	50.0	32°10'22.80"N	34°52'37.57"E	60.7	104.4
11	600	1001.6	49.1	32°10'36.96"N	34°52'50.04"E	39.2	13.5
12	660	1001.6	48.3	32°10'44.05"N	34°52'52.26"E	15.7	35.4
13	720	1001.0	48.3	32°10'41.88"N	34°53'3.36"E	22.7	107.7
14	780	999.4	47.8	32°10'24.83"N	34°53'11.71"E	74.6	217.8

Equally the bar graph is another representation of the Labdisc data measurements. Here the graph provides a clear visual understanding of Robert Boyle’s observations about the relationship between the pressure and volume of a gas, critical in building internal-combustion and steam engines.

Demo steps:

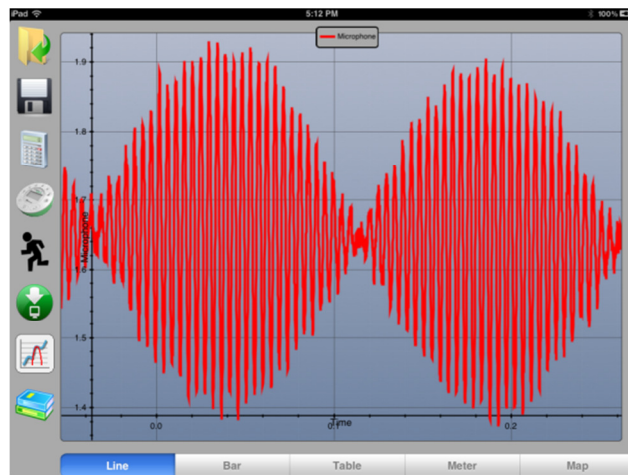


- Click the *Open icon* and select the “*Boyle’s Law*” experiment
- Explain the purpose of the experiment
- Boyle’s Law states that at constant temperature the pressure of a gas is inversely proportional to its volume. In the experiment the compressed gas in a syringe pushes the molecules together. The gas occupies less volume and the molecules with less space to move in hit the walls of the syringe more often and with increased pressure.
- Show the Bar Graph. Click the Table key and show the 5 measurements

A sound beat graph helps us appreciate iPad’s multi-touch functionality, together with Labdisc’s high accuracy and high sampling rate. This experiment is created with two tuning forks recorded by the Labdisc at 25,000 samples per second.

Demo steps:

- Click the *Open icon* and select the “*sound beat*” experiment
- Use two fingers to zoom-in on the graph to see the sine wave inside the beats – point out that this is a mathematically perfect shape!
- Do the same along the y axis of the graph to increase the amplitude



Last but not least - Curriculum content. The GlobiLab software includes activities and cookbooks for creating experiments in both English and Spanish. Investigating key science concepts, every workbook contains core background knowledge, hypothesis and guidelines for measurement and analysis, with suggested activities for further investigation. The workbooks seamlessly integrate the Labdisc with key syllabus stages and national attainment targets.

Demo steps:

- *Click the workbook icon (last on the left tool bar) and select one of the two samples activities*

