

Anthropometric Measurement Interface

Demonstration Guide

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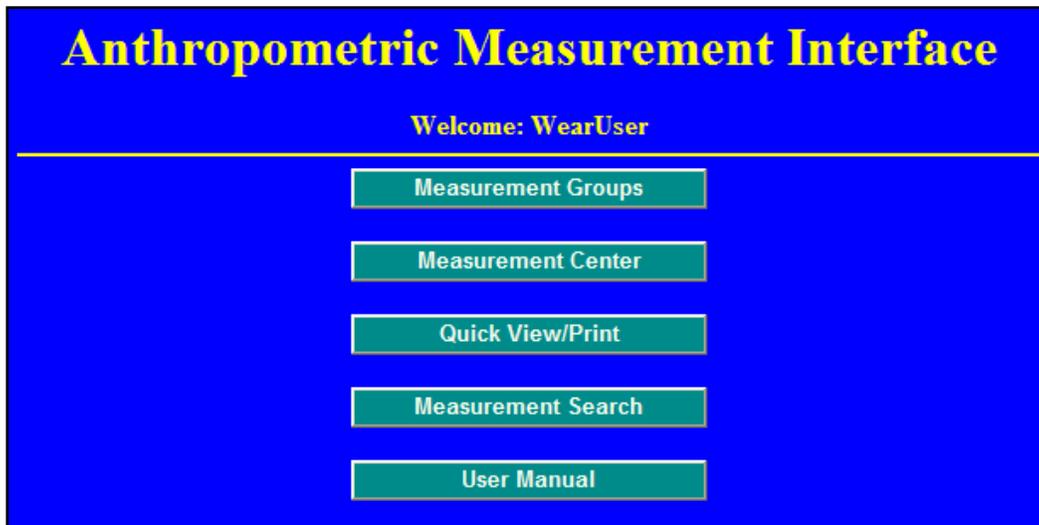


Figure 1 – AMI Main Menu

Introduction: The Anthropometric Measurement Interface (AMI) is a web-based software tool whose main goal is to facilitate collaboration and data sharing between anthropometric researchers across the globe. The intent of AMI is for researchers to enter descriptions of the measurements they take in various anthropometric studies using the standard measurement XML schema. AMI allows users to:

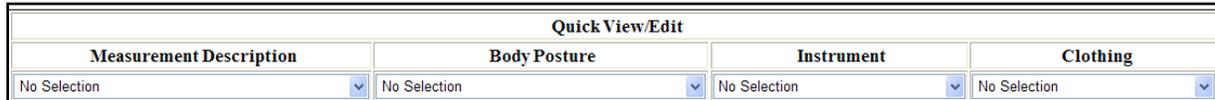
- 1.** Plan measurements for a future study based on previous methods
- 2.** Compare their measurement methods to others
- 3.** Search for similar measurements taken by others to perhaps expand their datasets.

By using AMI, determining similarity of a measurement is made much easier. Instead of reading a description of how the measurement was taken, differences can be highlighted easily, through use of the standardized XML. For example, if you are interested in the height of a seated person. If a measurement is taken in France in the same exact manner as one taken in the United States, except for the clothing worn by the subjects during the measurement, is it the same measurement? That is for you, the AMI user to decide. However, AMI will make your decision easier by highlighting the differences.

Note: For purposes of this demo, certain capabilities (including save ability) have been disabled. To obtain a full version, you must register for a free account at <http://wear.istdayton.com>

Create Measurement: Navigation: Main Menu/Measurement Center/Add New Measurement

An AMI ‘measurement’ consists of 4 main components: Measurement Description, Body Posture, Instrument, and Clothing. Each of these components are defined independently and combined to form a ‘measurement.’ When creating a measurement, the Quick View/Edit box (Figure 2) at the top displays the name of each of the chosen options the 4 measurement components. From this box you can choose a pre-existing definition for a particular component, or in the box below, you click a tab for the corresponding aspect.



Quick View/Edit			
Measurement Description	Body Posture	Instrument	Clothing
No Selection	No Selection	No Selection	No Selection

Figure 2 – Measurement Creator Quick View Box

Measurement Description - The main portion of a measurement is in the ‘Measurement Description’ Component. In this section, you describe the actual procedure of the measurement. This includes landmarks, reference planes, body segments, etc.



Measurement Description | Body Posture | Instrument | Clothing | Global Objects

Measurement Description

Select an existing description or click 'Add new Measurement Description' to create a new one.

No Selection | Add new Measurement Description

Figure 3 – Measurement Description Tab

1. To add a new measurement description component, click the ‘Add New’ button within the ‘Measurement Description’ tab (Figure 3). It is possible that another AMI user (or even yourself) has defined your measurement before. In that case, select the measurement from the drop down list to the left.
2. Select the appropriate category for the measurement (usually distance) from the drop down list.
3. Select appropriate values for each of the attributes. If unsure of what an attribute means, click the attribute label and a box will pop up with a description (Figure 4).
4. To include landmarks in the description, check the box next to ‘Related Landmarks’. This will populate additional options.
5. Once complete, give the Measurement Description a name and click the ‘Save’ button (if you have appropriate privileges.)

Figure 4 – Add Measurement Description dialog. (Pop-up box illustrated)

Body Posture – This component describes the posture of the subject being measured. Users are permitted to describe the overall posture (standing, sitting) and breath type, as well as details about specific body part poses (arm, hand, foot, etc)

Figure 5 – Body Posture Tab

1. To add a new body posture component, click the 'Add New' button within the 'Body Posture' tab (Figure 5). It is possible that another AMI user (or even yourself) has defined this posture before. In that case, select the posture from the drop down list to the left.
2. Select the appropriate posture values for the measurement.
3. To further define a value for a specific body part, check the box left of the body part label. (Figure 6).

Figure 6 – Add Body Posture Dialog

4. You can now add a new leg pose, or you can select a pre-existing one. To add a new one, click the 'Add New Pose' button (Figure 7).
5. Select appropriate options, then click the 'Save' button (if you have appropriate privileges.)
6. Once complete, give the Body Posture a name and click the 'Save' button (if you have appropriate privileges.)

Figure 7 – Leg Pose Dialog

Instrument – This component describes the instrument used to perform the measurement. It could be an anthropometer, a caliper, or even a scanner.

Figure 8 – Instrument Tab

1. To add a new instrument component, click the 'Add New' button within the 'Instrument' tab (Figure 8). It is possible that another AMI user (or even yourself) has defined this instrument before. In that case, select the instrument from the drop down list to the left.
2. Select the category of the instrument. Based on this selection, different options will become visible in the dialog (Figure 9).
3. Once complete, give the Instrument a name and click the 'Save' button (if you have appropriate privileges.)

Figure 9 – Instrument Dialog

Clothing – This component describes the clothing by the subject during the measurement.

Figure 10 – Clothing Tab

1. To add a new clothing component, click the 'Add New' button within the 'Clothing' tab (Figure 10). It is possible that another AMI user (or even yourself) has defined this clothing before. In that case, select the clothing from the drop down list to the left.
2. Select the appropriate clothing worn for each part of the body (Figure 11). It is not required that there will be a value for each portion.
3. Once complete, give the Clothing a name and click the 'Save' button (if you have appropriate privileges.)

Figure 11 – Clothing Dialog

After selecting (or creating) the desired components, you can click the ‘Output to XML’ button, to view an XML file of the (so far) unsaved measurement (Figure 12).

Figure 12 – Measurement Creator Main Screen

Finishing up

1. When finished, click the ‘Save this Measurement’ button at the top to open the save dialog box (Figure 13).
2. At this point, AMI assigns a name to the measurement (this is not changeable). If desired, an alternate name can be assigned.
3. The measurement can be also associated with a particular survey.
4. Once complete, click the ‘Save’ button (if you have appropriate privileges.)

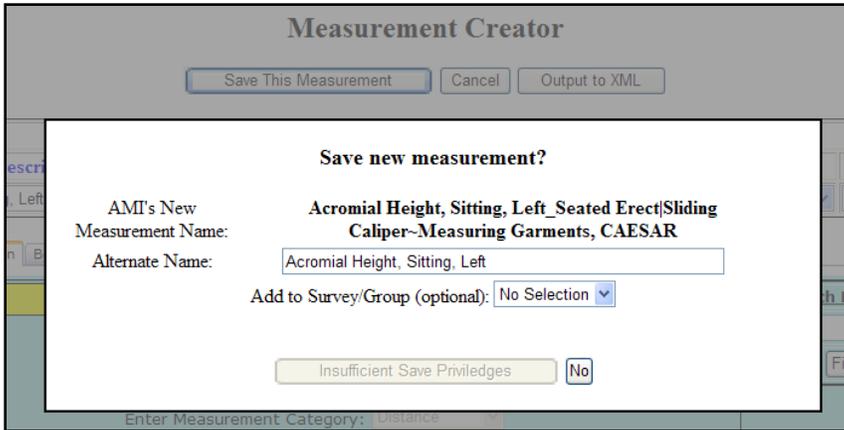


Figure 13 – Measurement Creator Save Dialog Box

View a Measurement: Navigation: Main Menu/Measurement Center/View Measurement

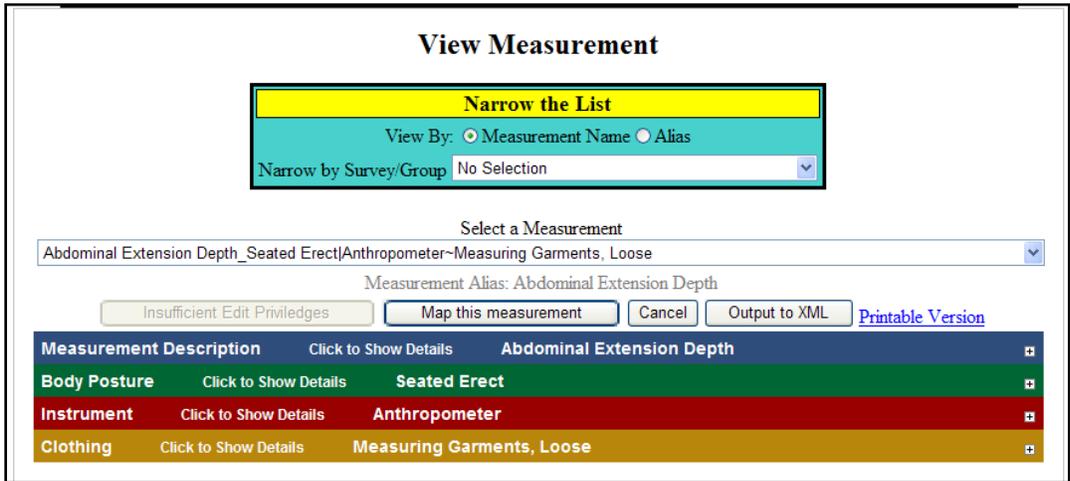


Figure 14 – View Measurement Page

Narrowing the List - All of the AMI measurements are listed in the drop down list. To make the list smaller, you can display only the measurements in a particular survey by selecting the survey from the blue box above (Figure 14). Here, you can also display the condensed name of the measurements by selecting the Alias button.

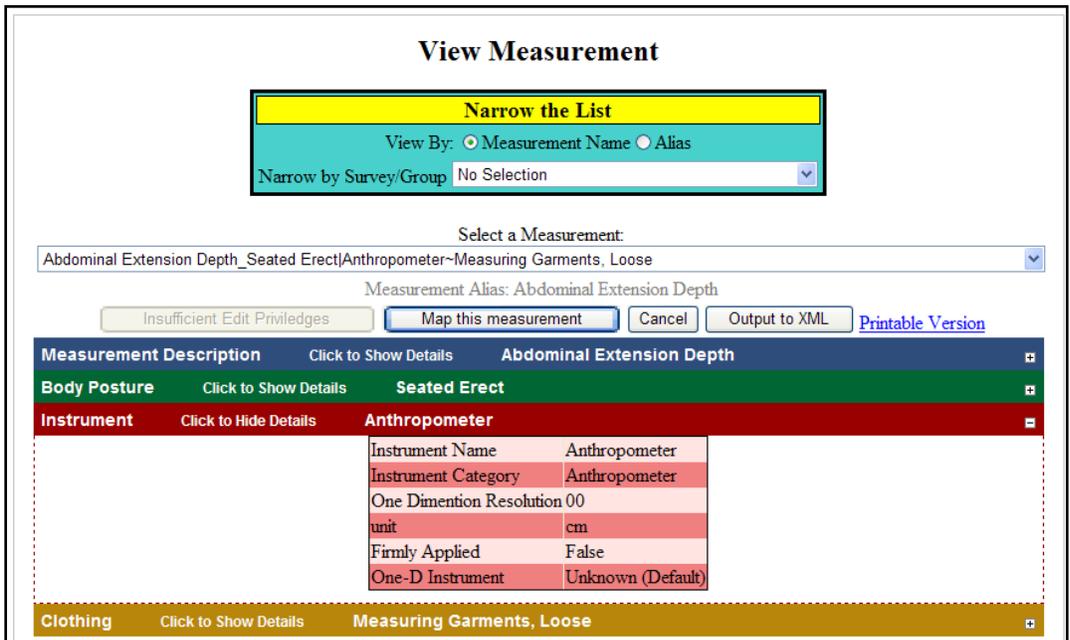


Figure 15 – View Measurement Page. Instrument Panel expanded

Options - When a measurement is selected, colored panels are displayed below. Click anywhere on the panel to display the details of that particular aspect (Figure 15). In addition to viewing the measurement, from this page, several other functions can be performed including:

1. Display a printable version
2. Output an XML file of the selected measurement
3. If you have created a Measurement Group, you could map the currently viewed measurement to a measurement. This is beyond the scope of this demo.
4. Edit the measurement button (if you have appropriate privileges.)

Measurement Search: Navigation: Main Menu/Measurement Search

Define your search: The four main components of a measurement are listed next to checkboxes. To include a component in your query, check the box to the left of it. This will introduce a tab to the box below.

The screenshot displays a web interface titled "Measurement Search". At the top, a box labeled "POSTURE OPTIONS" shows "Posture Name: Seated Erect". Below this, a message states "27 Measurements meet the current criteria." and a "Submit Search" button is visible. The search criteria are defined by a section titled "What do you want to search on?" with four checkboxes: "Description" (unchecked), "Posture" (checked), "Instrument" (unchecked), and "Clothing" (unchecked). A tab labeled "Body Posture" is active. Below the tab, the "Search by:" section has two radio buttons: "Your own Criteria" (unchecked) and "Existing Posture" (checked). A dropdown menu under "Existing Posture" is open, showing "Body Posture" as the category and "Seated Erect" as the selected item.

Figure 16 – Measurement Search. Existing Posture.

You can search by an existing Posture (for example) (Figure 16) or you can create your own (Figure 17). This is achieved by choosing the appropriate 'Search By' radio button at the top of the tabbed window. When creating your own criteria, check the box to the left of the aspect to activate the control then make a choice. Notice that whenever a new attribute is specified, the page is refreshed with the number of measurements currently in AMI that meet the current search criteria.

POSTURE OPTIONS
Main Pose: Sitting

136 Measurements meet the current criteria.

What do you want to search on?

Description
 Posture
 Instrument
 Clothing

Body Posture

Search by: Your own Criteria Existing Posture

Body Posture

Main Pose:

Torso Pose:

Breath Type:

Posture Description:

Leg Pose

Foot Pose

Arm Pose

Hand Pose

Figure 17 – Measurement Search. User Defined

When satisfied, click ‘Submit Search’ to return all AMI measurements that meet your criteria (Figure 18). AMI returns the name of all matching measurements as well as a summary of your search criteria. Click a particular measurement name to view the description.

Search Criteria	
POSTURE:	Posture Name: Seated Erect
Measurement Name (Click for description)	
Abdominal Extension Depth Seated Erect/Anthropometer~Measuring Garments, Loose	
Acromial Height, Sitting, Right Seated Erect/Anthropometer~CAESAR Measurement Garments	
Acromial Height, Sitting, Right Seated Erect/Anthropometer~Measuring Garments, Loose	
Biacromial Breadth Seated Erect/Anthropometer~Measuring Garments, Loose	
Bideltiod Breadth Seated Erect/Anthropometer~Measuring Garments, Loose	
Buttock Knee Length, Right Seated Erect/Anthropometer~CAESAR Measurement Garments	
Buttock Knee Length, Right Seated Erect/Anthropometer~Measuring Garments, Loose	
Buttock Popliteal Length, Right Seated Erect/Anthropometer~Measuring Garments, Loose	
Cervicale Height, Sitting Seated Erect/Anthropometer~Measuring Garments, Loose	
Chest Height, Sitting Seated Erect/Derived~Measuring Garments, Loose	
Elbow Height, Sitting, Right Seated Erect/Anthropometer~CAESAR Measurement Garments	

Figure 18 – Search Results