

Scope and Vision

Phoenix Ambulatory Blood Pressure Monitoring System

© 2009 Christopher J. Adams

14 June 2009

This work is licensed under the Creative Commons Attribution 3.0 Unported License.
To view a copy of this license, visit <http://creativecommons.org/licenses/by/3.0/> or send a letter to
Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

1

Table of Contents

I. Mission	VII. Requirements
II. Scope	VIII. Justifications
III. Stakeholders	IX. Assumptions
IV. Goals & Goal Conflicts	X. Agreed Priorities
V. Dictionary	XI. Acceptance Criteria
VI. Scenarios, Stories, Use Cases & Exceptions	XII. Parking Lot

14 June 2009

2

Mission

- Develop an ambulatory blood pressure monitor
 - Inexpensive
 - Unobtrusive
 - Easy to use
 - Collects a week of blood pressure measurements
- Develop a means for chronobiological analysis of the collected blood pressure measurements

14 June 2009

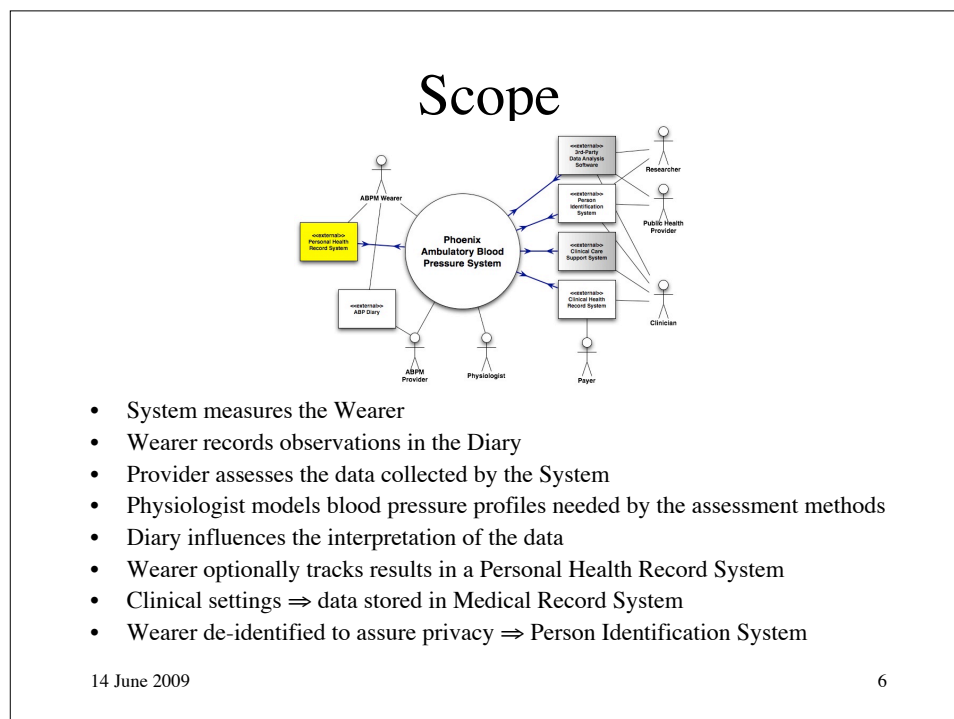
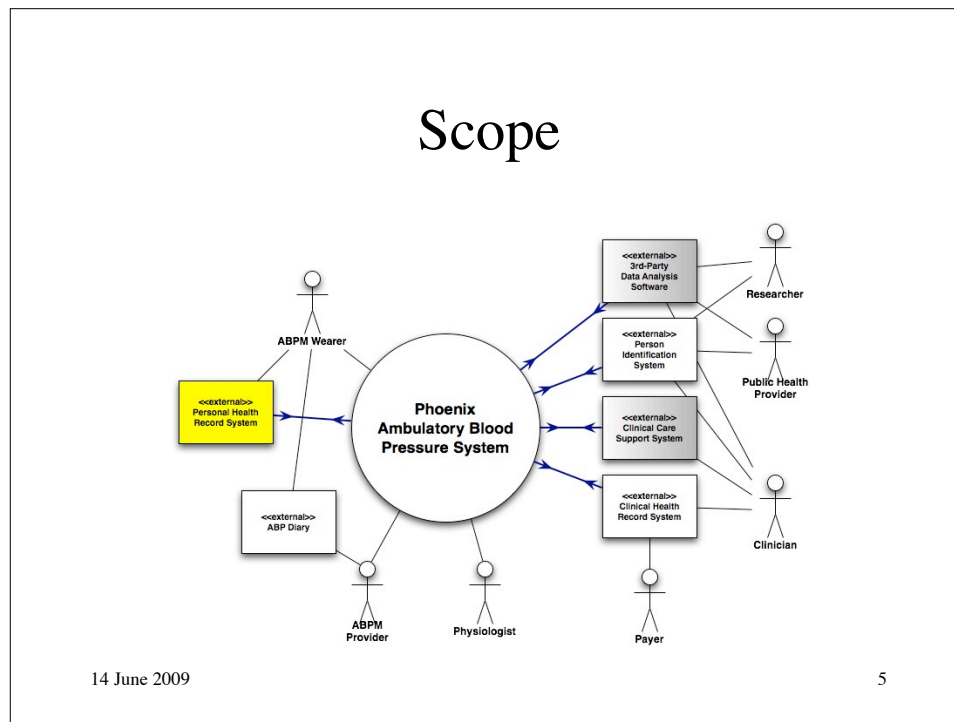
3

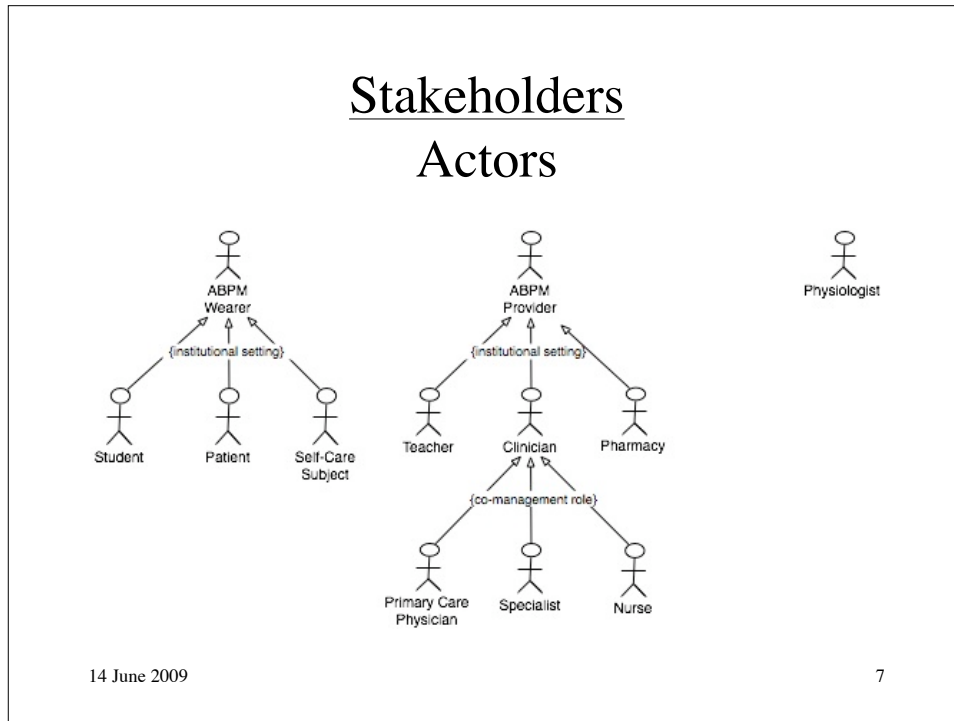
Mission

- Be a learning community
 - IEEE study group
 - Open source
- Deliver the monitor and analytic framework to the Halberg Chronobiology Center
 - For long term use on massive scale to
 - Obtain measures of health
 - Encourage the development of techniques for
 - Diagnosis
 - Prevention
 - Treatment

14 June 2009

4





Stakeholders

http://www.phoenix.tc-ieee.org/014_Systems_Architecture_and_Engineering/all-in-one.html#requirements

14 June 2009 8

Goals & Goal Conflicts

- Make a monitor that is
 - Inexpensive
 - Unobtrusive
 - Easy to use
 - Collects a week of blood pressure measurements

14 June 2009

9

Goals & Goal Conflicts

- Inexpensive
 - Price not a barrier to use
 - Less expensive than blood pressure cuff
 - Less expensive than wrist watch
 - < US\$50
 - Less expensive than “two bushels of yams”
 - Third-world friendly
 - < US\$10

14 June 2009

10

Goals & Goal Conflicts

- Unobtrusive
 - When wearing monitor, patient can
 - Forget about, be unaware of device
 - No more encumbering than
 - Wrist watch
 - Band-aid™
 - Piece of jewelry
 - Usable wherever the patient is
 - At home
 - At work when allowed
 - Not only at hospital, clinic or doctor's office

14 June 2009

11

Goals & Goal Conflicts

- Easy to use
 - Easier to use than current:
 - Blood pressure cuffs
 - Home BP monitors
 - Patient can:
 - Ignore device
 - Determine that device is functioning normally
 - Observe a blood pressure and heart rate measurement
 - Device
 - Is automatic
 - measurements taken regardless of patient behavior
 - Allows manually initiated measurements

14 June 2009

12

Goals & Goal Conflicts

- Collects a week of blood pressure measurements
 - Must measure
 - Systolic and diastolic blood pressure
 - Heart rate
 - At least as accurate as current:
 - Blood pressure cuffs
 - Home blood pressure monitors
 - Would also like to measure
 - Physical activity
 - To determine if vigorous body movement, such as physical exercise, influenced the blood pressure measurement
 - Blood flow
 - Records measurements
 - at least every half hour
 - for at least 7 days

14 June 2009

13

Goals & Goal Conflicts

- The Halberg Chronobiology Center wants the monitor
 - For long term use on massive scale
 - To obtain measures of health
 - To encourage the development of diagnostic, prevention and treatment techniques

14 June 2009

14