

# Virginia Tech "Jack" Team Solution - HealthWatch

Healthwatch presents the appearance of a conventional wristwatch with a large display. In addition to a digital time display, Healthwatch monitors the user's heartrate. If a cardiac event is detected, Healthwatch connects the user via Bluetooth to a satellite phone, to assure communication with medical help in remote areas where mobile wireless service is unreliable. A built-in tracking device can help responders locate the user in case of emergency.

## Persona Jack:

Jack is a 68-year old native of rural West Virginia. Jack left school in the 5th grade to work on his family's farm when his father became ill. He eventually took over the farm from his parents. Jack later developed hypertension and chronic obstructive pulmonary disease (COPD). He decided to sell the farm, keeping only a small piece of the property and the family home. Jack receives monthly Social Security checks totaling about \$1100.

Wireless service is unreliable where Jack lives, and he is unable to afford monthly wireless service. So he bought a refurbished cell phone, paying only for the airtime minutes he needs for emergencies. He finds himself much more comfortable living alone, and especially driving in bad weather. He spends about \$8 a month on pre-paid minutes.

Jack has survived his share of medical crises as his conditions worsen. Understanding little about his conditions, Jack is inconsistent with his diet and complicated medication schedule. Sudden weight gains and breathing problems send him rushing 15 miles to his doctor. These symptoms usually only require an adjustment in his medications. Jack is resisting his doctor's suggestion that he move closer to a city where medical services for his conditions are more accessible.

Throughout the world, as in many rural areas of the US, access to wireless technologies holds the potential for ready access to medical help for people with serious medical conditions. Though the technology is improving, low income and limited literacy and language skills remain common barriers.



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