Multi-Touch Poker Table Top
for the iPhone

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I. Description

This project is motivated by the growing ownership of iPhone and iPod Touch devices. These devices are carried by numerous people, including a growing number of enterprise users. The ability to use these devices to create community of pleasure locally is something that has not been explored. The ability to install an application and play a game with a set of strangers or friends is very intriguing.

The multi-touch table would provide a unified interface to integrate personal iPhone and iPod Touches into a network for gaming purposes. For this project, a game of Texas Hold'em Poker will be integrated. Also, the table would allow users to play music from their own devices through built-in speakers. Finally, the table would provide menu and ordering capabilities for a café.

The ultimate goal of this project is to create a centralized area for a community to interact over a game or music in a coffee shop, waiting room, or other public places.

II.   Specifications and Requirements

Multi Touch Table

With the proper options on each device enable, each device will Auto-connection to the system

The constructed table will not be higher than 3 feet

The resolution of the screen will be at least 800 x 600

The diagonal size of the screen will be at least 30 inches

The table top will have enough room to accommodate up to 4 coffee mugs

The table will include a four docks to charge devices while playing using USB 2.0

iPhone Software

Music will be able to play through speakers attached to the device

Auto Player assignment based upon geographic location using magnetic north as a delimiter

Player chip count will be displayed on the iPhone/iPod Touch

Hole cards will displayed face down until the user flips the device with the screen facing towards them.

Cards will flip in both horizontal and landscape orientations

Texas Hold 'em Software

The Software will be able to support the following devices:

iPhone EDGE
iPhone 3G

1st Generation iPod Touch

2nd Generation iPod Touch

The table will support the iPhone OS 3.0

The table will support up to four iPhones/iPod Touches

The software will utilize OpenGL graphics

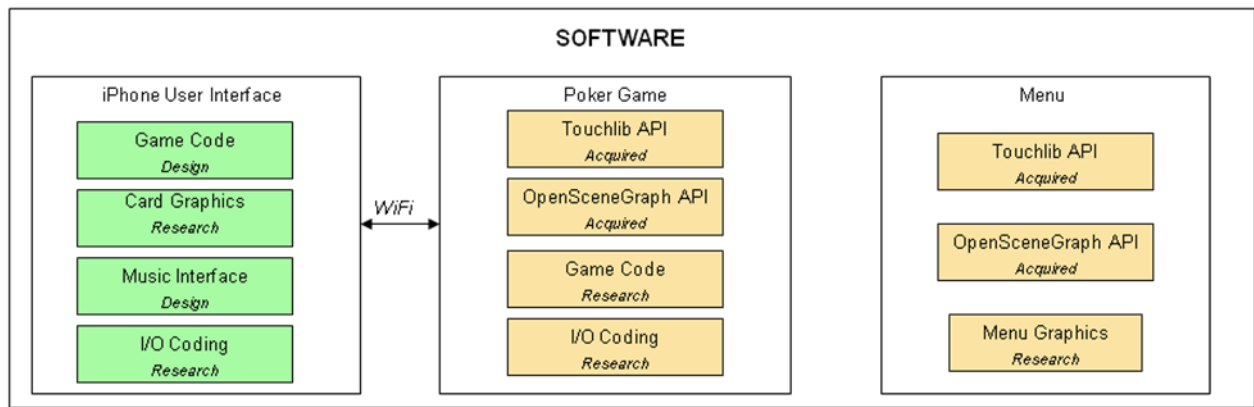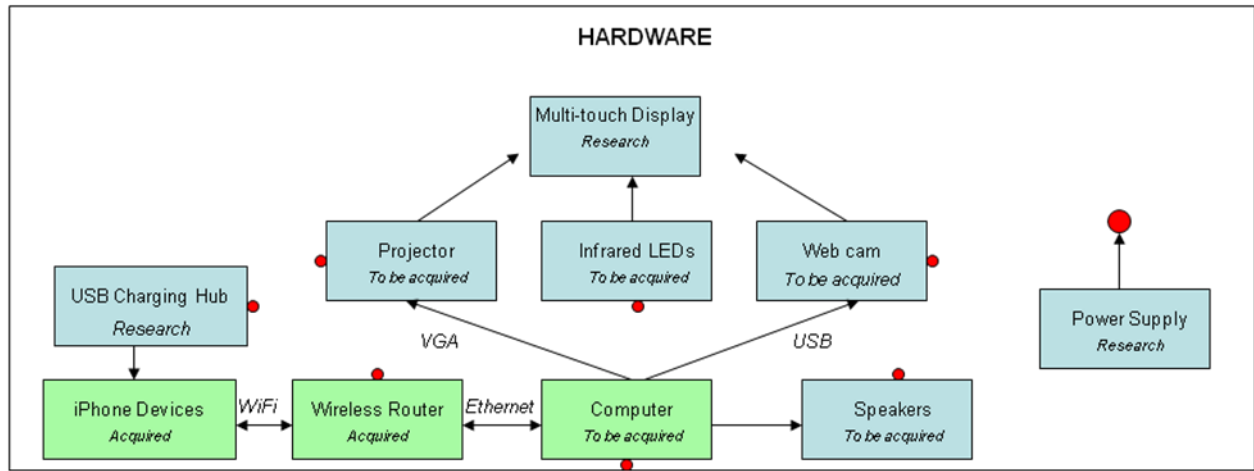The software will support a minimum of two and maximum of four players

The software will support Limit and No Limit Texas Hold 'em Poker

Player chip count will be displayed on the table

The software will allow the user to bet chips using gestures on the table

The software will include a touch screen menu to pause and restart games

III. Project Block Diagram

HARDWARE

- Multi-touch Display
  Research
- Projector
  To be acquired
- Infrared LEDs
  To be acquired
- Web cam
  To be acquired
- Power Supply
  Research
- USB Charging Hub
  Research
- iPhone Devices
  Acquired
- Wireless Router
  Acquired
- Computer
  To be acquired
- Speakers
  To be acquired

VGA — USB — WiFi — Ethernet

SOFTWARE

iPhone User Interface
- Game Code
  Design
- Card Graphics
  Research
- Music Interface
  Design
- I/O Coding
  Research

WiFi

Poker Game
- Touchlib API
  Acquired
- OpenSceneGraph API
  Acquired
- Game Code
  Research
- I/O Coding
  Research

Menu
- Touchlib API
  Acquired
- OpenSceneGraph API
  Acquired
- Menu Graphics
  Research

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IV. Budget and Financing

Projector	Donated/200.00
iPods/iPhones	Aquired
Webcam	30.00
LEDs	.30 each * 75 = 22.50
Plexiglass	25.00
Wood/Table Construction	30.00
Estimated Total	337.50
Estimated Total / 3 group members	112.50