# National Datacom Application Documentation

*Software Engineering Final*

**Brandon O.,  John W., Xen M.**

**4/28/2015**

Abstract: This document covers all documentation that is in connection with National DataCom's Application for google.The customer has asked that the application should work on networks for a I.T department. This is recognizing that said department has admin privileges. For the ping test, this can be tested on a home network. A computer will be used for the ping alongside the application on a phone. The calculator will be checked by a computer to verify all results in range are accurate.

# Table of Contents

# Team Members

**Brandon Olson:**

>   Programmer, GUI, Documentation

**Xen Miller:**

>   Programmer, GUI, Documentation

**John Wisniewski:**

>   Programmer, GUI, Documentation, Client Contact

# Project Description

National Datacom's quote tool, is a tool that is being created to help market National Datacom's sales department. This is designed for IT departments to use to help them with their daily routines. The tool is actually a application with a calculators and ping tools used by I.T departments to help with their work. The application has a link to National Datacoms quoting tool. This is so the I.T department can see the better equipment, up speed, down speed, customer service and a better price that their company would get if said company switched to using National Datacom's services. With these better specs, the I.T professional that brings this to management, will be seen as a better employee, thinking outside the box to help their employer.

# Testing

## Testing Types Implemented

### Conversion Testing

The project was originally made in Unity 4.6. Unity has upgraded to Unity 5. The software should be on the latest the version of Unity. This will be done by first testing the application in the Unity environment. Then making a build on a phone to ensure the product still works.

### Job Stream Testing

Testing will be done to make sure the application can not be used for purposes other than the specified means. The application will be tested to make sure a user can not "break" the interface.

### Interface Testing

Testing will be done to make sure the application can not be used for purposes other than the specified means.

### Security Testing

The application will be run, based on the focus of the GUI. To make sure there is no lag time, and the application is easy for a user to follow.

### Recovery Testing

The team will test on hardware(cell phones) available to the team. For cell phones that are not available, the team will use google to determine capatability.

### Performance Testing

The customer has asked that the application should work on networks for a I.T department. This is recognizing that said department has admin privileges. For the ping test, this can be tested on a home network. A computer will be used for the ping alongside the application on a phone. The calculator will be checked by a computer to verify all results in range are accurate.

**Acceptance Testing**

All aspects of the application will be looked at to determine if the application meets the

clients needs as said on the contract.

# Feasibility

National Datacom's quote tool, is a tool that is being created to help market National Datacom's sales department. The is designed for I.T departments to use to help them with their daily routines. The tool is actually a application with a calculators and ping tools used by I.T departments to help with their work. The application has a link to National Datacoms quoting tool. This is so the I.T department can see the better equipment, up speed, down speed, customer service and a better price that their company would get if said company switched to using National Datacom's services. With these better specs, the I.T professional that brings this to management, will be seen as a better employee, thinking outside the box to help their employer.

Is the application real? A market exist for this product due to the fact of its use. There is a true need for this, so the client can better reach customers. Customers that have a need for a better network solution will benifit from this. Customers will not by this product, but it will be a doorway for potential sales. The product can be made using Unity 5's mobile compadability. All of the abilities needed are in house and no licenses are required. The software is real and has a real use for the client.

Can we in? The proposed product is competitive in sales in this area. There is not a sales tool being used in such a way, to help businesses find a better I.T solution. We will compete in price because it is free. The product will be in the market this Quarter. This product is sustainable for the life of the clients company. We do not expect a competitive response to happen any time in the near future. The competition is in line with our strategy due to the fact that there is no competition for the use of this software.With all of this is mind, Can we and the customer win? Yes.

Is it worth it? The realistic sale of the product is that it is free. The clients offers will

increase as the application is used more. Revenue for the company developing the app is being

paid by the client. The client is using it as a marketing tool. The products cost is acceptable as

there is little overhead creating the application. The product will be profitable in terms of that the

client will have another way to get quotes to businesses. There is adequate return on investment

because the application has little overhead. The software offers a opportunity to client as a

different marketing tool.  The risks are low with high reward and are acceptable to the client.

This product is in line with the clients strategy because they want a unique way to have I.T

professionals to see other solutions for their networks.

# UML Chart

# Gantt Chart
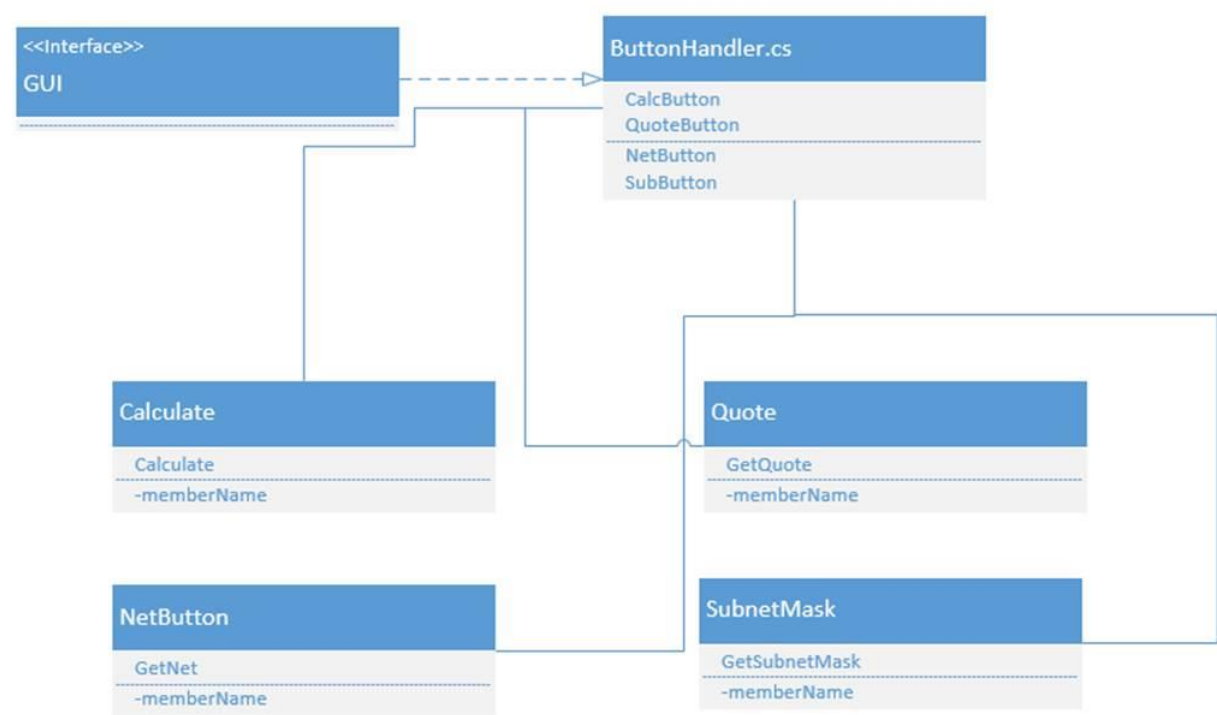
## National DataCom Project Gantt Chart
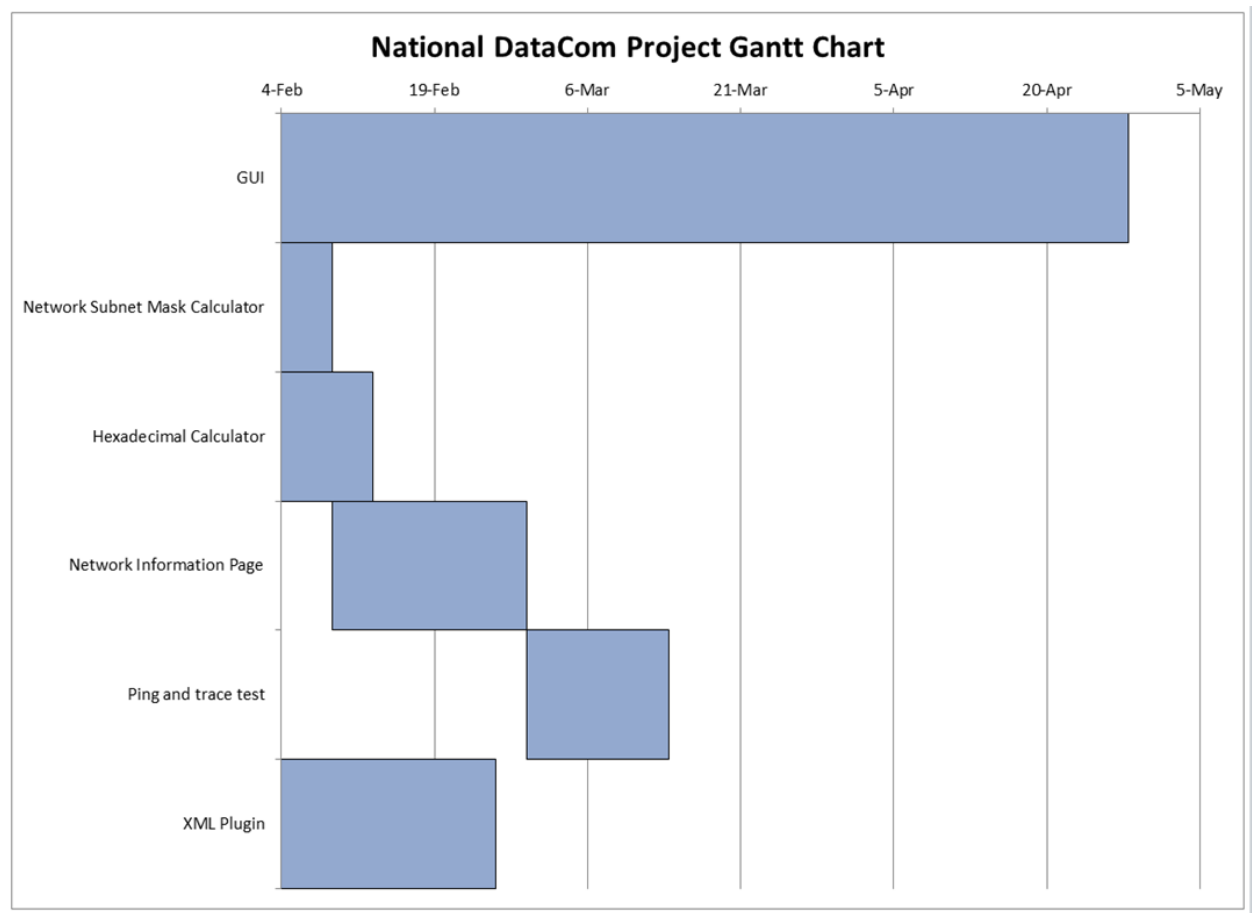
# Contract with client

**Terrasect Mobile Technology Service Agreement**


       This Technology Service Agreement is made and entered into as of **January 30, 2015** the "**Effective Date**" by and among **Terresect Mobile, LLC** a Arizona Limited Liability Corporation, (**"Terrasect Mobile"**) and **National Datacom, LLC** (**"National Datacom"**)**,** hereinafter referred to as **"Client."** Terrasect Mobile or Client shall each be hereinafter referred to individually as a **"Party"** and collectively as the **"Parties."** Software applications developed for the client will be referred to as **"App or Apps."**


Recitals

       WHEREAS, Client wishes to retain Terrasect Mobile as a independent contractor in a consulting capacity to perform the Services (as defined below and in more detail in the attached Schedule), and Terrasect Mobile desires to render such Services to Client in accordance with the terms set forth herein.

       NOW THEREFORE, in consideration of the promises and covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

*Agreement*

1.      **Services.**

      **A.**      **Terrasect Mobile's Obligations and Performance of Services.**  During the App Development Period (as hereinafter defined in the attached Schedule), Terrasect Mobile shall provide software development services, including; coding, testing, graphic art production, application store management and other professional functions and services as set forth in the attached Schedule.  In addition, upon agreement of both Parties as to additional terms and conditions, scheduling, pricing arrangements and other details, Terrasect Mobile shall perform services related to software development, as will be set forth in the Schedule and Statement of Work. In carrying out obligations under this Agreement, Terrasect Mobile's employees and its subcontractors (the **"Terrasect Mobile Personnel"**) shall be trained and supervised in accordance with accepted industry standards. The Schedule and any Statement of Work described in this paragraph shall be attached hereto, and are incorporated herein by this reference.  Schedules that are executed after Schedule A shall be identified as Schedule B, C, and so forth.  The Statement of Work shall each refer to the then-current Schedule, and be numbered consecutively as Schedule A1, A2, B1, B2 and so forth.  All apps developed and submitted by Terrasect Mobile Personnel to Google, iTunes, Amazon and all other Application Stores shall conform to the reasonable rules and regulations of the Application Stores  (the "App Stores").

**B.** **Client's Obligations and Payment of Services.** Client shall cooperate with Terrasect Mobile by making available, as reasonably requested by Terrasect Mobile; necessary client corporate contact information, documentation and artwork or logos, relevant technical information or data and background or content information with sufficient access to the materials within a reasonable timeframe so that Terrasect Mobile may accomplish its obligations and responsibilities hereunder. In consideration of Terrasect Mobile's performance of the Services, and for such other promises as are herein set forth, Client agrees to pay Terrasect Mobile the applicable charges specified in this Agreement. Upon signed execution of this Agreement, Client shall fund the lesser amount of $150 USD or 50% of total services due (as defined in the Schedule) directly to Terrasect Mobile as a retainer. This payment is non-refundable upon Agreement execution, in the event of Agreement cancellation after execution; the retainer may be applied to future Agreements between Terrasect Mobile and the Client at the discretion of Terrasect Mobile.

**2.** **Term and Termination.**

**A.** **Term.** The initial term of this Agreement shall commence on the Effective Date and continue until the App development is completed, uploaded to relevant App Stores and accepted by the Client, unless earlier terminated as provided herein. Schedule A, and any subsequent Schedule as may be entered into by the Parties, and any Statement of Work, shall be in effect for a period of time set forth in such a Schedule or Statement of Work. References in this Agreement to the "**Term**" shall be to the initial term and all extensions thereof, as described in the Schedule and Statement of Work.

**B.** **Termination.**

**(1)** This Agreement may be terminated by Terrasect Mobile or Client upon prior written notice if the other party breaches any material term or condition of the Agreement and such breach is not promptly cured.

**(2)** In the event of termination by Terrasect Mobile because of a breach by Client, or if Client terminates the Agreement for any reason other than a breach of this Agreement by Terrasect Mobile prior to execution of a Schedule or Statement of Work, Client shall immediately forfeit retainer payment to Terrasect Mobile. In case of any conflict between this clause and a cancellation policy written directly into a Schedule or Statement of Work, the terms of that cancellation policy will take precedence.

**(3)** Notwithstanding the foregoing or any provision contained herein to the contrary, in the event the Client terminates Agreement for any reason other than a breach by Terrasect Mobile, Client shall immediately pay to Terrasect Mobile all undisputed amounts reasonably incurred by Terrasect Mobile in performance of the Schedule or Statement of Work up to the date of termination. In case of any conflict between this clause and a cancellation policy

written directly into a Schedule, the terms of that cancellation policy will take precedence with respect to the services detailed in the Schedule and/or Statement of Work.

## 3.    Payments.

**A.    Fees.**  In consideration for the provision of the Services, Client agrees to pay to Terrasect Mobile an aggregate amount (the **"Fee Amount"**) as set forth in the Schedule or as set forth in a Statement of Work.  The Fee Amount for Recurring Services shall be billed by Terrasect Mobile as indicated in the applicable Schedule.  Terrasect Mobile shall mail Client an invoice for such Fee Amount upon Agreement execution and after the Schedule or Statement of Work completion for remaining balance of the Agreement. Payment for the undisputed Fee Amount for such services shall be due within 30 days following the date Client receives Terrasect Mobile's invoice.  Travel and other expenses that Terrasect Mobile is entitled to recover from Client shall be billed in arrears, and Terrasect Mobile will use reasonable efforts to include such expenses within the invoice for the month following the month in which they are incurred.  Additional Billing procedures and fee schedules for the Event shall be detailed in the Schedule subsequently executed by the Parties, or in the Statement of Work.

**B.    Taxes.**  Client shall, in addition to the other amounts payable by Client under this Agreement, pay all applicable local, state and federal taxes (but excluding taxes imposed on Terrasect Mobile's income) levied or imposed by reason of the transactions contemplated by this Agreement.  Notwithstanding the foregoing, if Terrasect Mobile incurs any such taxes, Client shall reimburse Terrasect Mobile for such amounts incurred.

**C.    Payment After Termination.**  Notwithstanding the foregoing or any provision contained herein to the contrary, in the event that this Agreement expires or is terminated by Terrasect Mobile or Client in accordance with Section 2.B above, Terrasect Mobile shall invoice Client for all work performed, and any expenses incurred and/or Event related expenses, up to the expiration or termination date, in accordance with the terms of this Agreement, and Client shall pay such amount, unless disputed, in accordance with this Agreement.

**D. Late Payments.**  In the event that Client fails to make timely payment of any amounts due hereunder within thirty (30) days after the same shall become due and payable, such amounts shall bear interest at the rate of fifteen percent (15%) per month, on the delinquent payment(s) sum from the date due until the date payment is received by Terrasect Mobile.  Notwithstanding the foregoing, Terrasect Mobile shall not be prevented from terminating this Agreement for default in the payment of amounts due hereunder.

## 4.    Warranty and Limitation of Remedies and Liabilities.

**A.    Warranty.**  Terrasect Mobile hereby warrants that it shall perform the Services and Provide Products in accordance with the terms set forth herein. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE HEREBY EXPLICITLY DISCLAIMED,

INCLUDING WITHOUT LIMITATION ANY AND ALL WARRANTIES OF MERCHANTABILITY AND/OR WARRANTIES OF FITNESS FOR ANY PARTICULAR PURPOSE. Without limiting the foregoing, it is agreed and understood that while Terrasect Mobile is obligated to provide Software Development or related technologies and services as a part of the provision of the Services, Terrasect Mobile makes no representation whatsoever as to the functionality of the Internet itself, Application Stores, Client infrastructure or Hardware and or technology outside of its control. Client acknowledges that connectivity to the Internet and related technologies depends in substantial part on the functionality of hardware, software and other means or devices and related utilities which are beyond the ability of Terrasect Mobile to control or manage. Accordingly, Terrasect Mobile makes no representation, warranty, guaranty or contractual commitment of any sort for services outside of its control or scope, other than to provide the Services as defined and described in this Agreement.

Client hereby warrants that all necessary corporate, legal and contractual action to authorize and permit execution and delivery of this Agreement and the obligations set forth herein has been taken, and that Client and its signatory to this Agreement has the authority to authorize this agreement.

**B.       Limitation of Remedies and Liabilities.** In no event shall any Party be liable for any incidental, consequential, special, exemplary, or indirect damages, including lost business profits, or loss, damage, or destruction of data, regardless of the form of action, arising out of or in connection with this Agreement or any provision thereof, or the use, the results of, or the inability to use any services or other items delivered under this Agreement, even if the Party has been informed of the possibility thereof in advance. Each Party's liability for damages for any cause whatsoever shall be limited to the Fee Amount. All the limitations stated in this Section 5 shall apply to all causes of action in the aggregate, including without limitation, breach of contract, breach of warranty, negligence, liability, misrepresentation and other torts. No action or claim relating to this Agreement may be instituted more than one (1) year after the event giving rise to such action or claim.

## 5.       Confidentiality.

**A.       Proprietary Information.** At considerable expense, each Party has in the past acquired and developed, and in the future will acquire and develop, a substantial amount of commercially useful information (as more fully defined below, the **"Proprietary Information"**) which gives it a competitive advantage over those who do not have, or would have to expend significant efforts to compile, comparable information. In the execution of their respective rights and obligations under this Agreement, the Parties may exchange, observe, learn or otherwise become aware of each other's Proprietary Information. For purposes of this Section 5, any Party who discloses such Proprietary Information shall be referred to as a **"Disclosing Party"** and any Party who receives, observes, learns or otherwise becomes aware of another Party's Proprietary Information shall be referred to as a **"Receiving Party."** Notwithstanding the foregoing, Proprietary Information shall not include (or as appropriate, shall cease to include) information

which a Receiving Party establishes it knew prior to first disclosure by the Disclosing Party; information which the Disclosing Party publishes or which otherwise enters the public domain without fault of a Receiving Party, and information which is independently developed by persons who have not had access to Proprietary Information.  In addition, nothing herein shall prevent a Receiving Party from disclosing Proprietary Information in response to an order from a governmental body or to a subpoena in any civil or criminal proceeding, <u>provided</u>, <u>however</u>, that, in each such instance, a Receiving Party shall provide notice thereof immediately upon receipt of such order or subpoena to the Disclosing Party and the Receiving Party shall cooperate with the Disclosing Party in its efforts to have such order or subpoena quashed, limited or narrowed.

   (1)   **Terrasect Mobile's Proprietary Information.**  In the case of Terrasect Mobile, such **"Proprietary Information"** shall include, but not be limited to: (i) the design, components and layout of Terrasect Mobile's computer facilities, communications network and the software which supports the Services; (ii) information concerning Terrasect Mobile's successful and unsuccessful tests and ideas and technologies related to the Services; (iii) information concerning Terrasect Mobile's business or business plans; (iv) information which Terrasect Mobile compiles and maintains in databases for its internal business purposes; (v) information disclosed to Client, in conversations verbally noted as "Confidential" or in documents marked "Confidential"; (vi) information concerning Terrasect Mobile's processes, procedures and methodologies related to the provision of the Services; (vii)  information concerning Terrasect Mobile clients, and (viii) any other information which Client is informed or reasonably should know that Terrasect Mobile regards as confidential.

   (2)   **Client's Proprietary Information.**  <u>In the case of Client, **"Proprietary Information"** shall include, but not be limited to: (i) </u>any data, information, design, process, procedures, techniques or formula; (ii) any business information (including, without limitation, financial information, marketing or business techniques, methods, plans, customers, or potential customers); (iii) information which Client disclosed to Terrasect Mobile, in conversations verbally noted as "Confidential" or in documents marked "Confidential", (iv) materials presented during the Software Development; and (v) any other information which Terrasect Mobile is informed or reasonably should know that Client regards as confidential.

   B.   **Confidentiality.** Each Receiving Party shall receive, develop and hold Proprietary Information in the strictest confidence and shall use its best efforts to preserve the confidentiality of such Proprietary Information with at least the same degree of care that it protects its own most confidential business information. Without limiting the foregoing, a Receiving Party shall not sell, transfer, publish, disclose, display or otherwise make available to outsiders, or use for its own benefit outside its relationship with the Disclosing Party, all or any part of the Proprietary Information without the prior written consent of the Disclosing Party, which may be granted or withheld in the Disclosing Party's sole discretion.  Disclosures of Proprietary Information between a Receiving Party's personnel shall be limited to the Receiving Party's employees, agents, and/or advisors (in each instance, a **"Receiving Party Confidant"**) with a need to know the same and made solely as necessary to enable the Receiving Party to execute and perform its rights, obligations and responsibilities under this Agreement.

C. **Cooperation.** If, notwithstanding a Receiving Party's efforts to maintain confidentiality for a Disclosing Party's Proprietary Information, one or more Receiving Party Confidants breach their respective confidentiality obligations, the Receiving Party shall so notify the Disclosing Party in appropriate detail immediately after learning of the same and shall reasonably cooperate with the Disclosing Party in any resulting litigation against any such breaching Receiving Party Confidant.

D. **Remedies.** Each Party acknowledges that its breach of the foregoing confidentiality obligations may cause the other great and irreparable injury for which there would be no adequate remedy at law. Accordingly, each Party agrees that if such breach or threatened breach is proved, the Disclosing Party shall be entitled to appropriate injunctive relief. If the Disclosing Party proves such breach or threatened breach is intended by any of the Receiving Party's officers or senior executives, the Receiving Party shall reimburse the Disclosing Party's costs and expenses of litigation (including, without limitation, fees of its attorneys and experts) and pay appropriate damages, and the Disclosing Party shall receive such other relief as the court deems equitable in the circumstances.

E. **Duration.** The confidentiality obligations set forth herein shall remain in effect with respect to the Proprietary Information for a period of two (2) years after the cessation or termination of the Services and/or this Agreement, even if dealings between Terrasect Mobile and Client and Operator have ceased. If a dispute arises between two or more Parties as to whether specified information remains subject to the above confidentiality obligations, the Receiving Party shall bear the burden of proving that at the relevant time the information does not fall within the definition of Proprietary Information.

F. **Return or Destruction.** Upon the written request of the Disclosing Party, the Receiving Party shall return or destroy any Proprietary Information in the Receiving Party's possession (which, in the case shall include any Proprietary Information located at any Event Premises), and shall provide the Disclosing Party with a certification that all Proprietary Information has been returned or destroyed.

# 6. Indemnity.

A. **Indemnification of Client by Terrasect Mobile.** Terrasect Mobile agrees to indemnify and hold harmless, the Client and its subsidiaries of and from any and all claims, demands, losses, causes of action, damage, lawsuits, judgments, including attorneys' fees and costs, to the extent caused by or arising out of or relating to the work at the Event Premises. **In no event shall the maximum liability hereunder exceed the sum of the attached Schedule.**

B. **Indemnification of Terrasect Mobile by Client.** Client shall indemnify Terrasect Mobile from and against any and all liabilities which may arise solely and exclusively as a result of Client's, its subsidiaries, subcontractors or industry partners, but not limited to: (1) authorization and permission granted Terrasect Mobile to engage in Software Development; (2) access to and use of relevant data, artwork, information and content; and, (3) any other technical

or non-technical items provided to and utilized by Terrasect Mobile in production of the Services; except where such Claims are a result of Terrasect Mobile's or Terrasect Mobile Personnel's negligence or willful misconduct.

**7.      Miscellaneous.**

**A.      Dispute Resolution.**

**(1)      Disputes.**   In the event that this Agreement, the Services, or anything related to the Agreement or the Services shall become the subject of any dispute (in each instance, a **"Dispute"**) between two or more Parties (collectively, the **"Disputing Parties"**), such Disputing Parties shall work with one another in good faith to resolve such Dispute.

**(2)      Arbitration.**   In the event that any Dispute cannot, in good faith, be resolved by the Disputing Parties to their mutual satisfaction within thirty (30) days, such Dispute shall be submitted to binding arbitration. The Disputing Parties shall mutually choose the arbitrator.   In the event that the Disputing Parties are unable to agree on the selection of an arbitrator, then an arbitrator shall be appointed by the American Arbitration Association.   The arbitration shall be held in accordance with the rules of the American Arbitration Association, provided, however, that the arbitrator shall not be empowered to award costs, fees or damages in excess of the limitations imposed under this Agreement to any Disputing Party.   Each Disputing Party shall bear its own costs and expenses incurred in connection with the arbitration.   The arbitration shall be held in the applicable state if initiated by Client and in the state of Florida if initiated by Terrasect Mobile.

**B.      Governing Law.**   This Agreement shall be governed by and construed under the laws of the state of Arizona, and such laws shall be controlling in the arbitration of any Dispute.

**C.      Amendment.**   This Agreement (including the Schedules and any Statements of Work attached hereto) may only be amended or modified by a written instrument signed by Terrasect Mobile and Client; provided, however, that the Operator must also execute a written instrument in the event that any such amendment or modification (i) amends or modifies a section of this Agreement that specifically mentions the Operator, and (ii) alters Operator's rights or obligations under such section of this Agreement.   The Terrasect Mobile persons empowered to execute this Agreement, any amendment hereto or any waiver of rights hereunder are its Chief Executive Officer, its Chief Operating Officer, its Chief Financial Officer and its Principal Managing Partners.

**D.      Authorship and Headings.**   The terms of this Agreement have been fairly bargained for after careful consideration by the Parties; therefore, this Agreement shall be enforced, interpreted and construed without regard to its authorship, and no inference shall be

drawn by the Parties or any third party including, without limitation, any court or arbitrator, by virtue of its authorship. The headings of Sections are inserted only as a matter of convenience and in no way define, limit, construe, or describe the scope or intent of such Sections nor in any way affect this Agreement.

**E.     Compliance with Laws and Regulations.** Each Party shall comply with all applicable local laws, ordinances, rules and regulations with respect to such Party's obligations hereunder.

**F.     Relationship of Parties; Independent Contractor.**  No Party is, and no Party shall hold itself out as, an agent, legal representative, partner, subsidiary, joint venture or employee of the other Party or the Operator.  No Party shall bind or obligate, or attempt to bind or obligate, any other Party in any way, manner or thing whatsoever, nor shall any Party represent that it has any right to do so. There is no fiduciary relationship between the Parties. Terrasect Mobile is and shall at all times be an independent contractor of Client or the Operator.

**G.     Trade and Service Marks.**  No Party shall use another Party's trademarks or service marks without the owning Party's express written consent, which may be granted or withheld in the owner's sole and absolute discretion.

**H.     Force Majeure.** No Party shall bear any liability for the failure to perform any of its obligations hereunder if such failure results from any labor dispute, fire, disaster, public emergency, riot, terrorism, war, unavoidable mechanical failure, general disruption of the Internet, interruption of the electrical power supply, Act of God, or any other cause beyond the reasonable control of the Party affected thereby.

**I.     Schedules.**  All Schedules to this Agreement are hereby incorporated by reference and made a part of this Agreement.

**J.     Press Releases.** No public statements (including, but not limited to press releases, on-line or off-line promotion, marketing materials and the like) concerning the existence or terms of this Agreement will be made or released through any medium except with the prior written approval of Terrasect Mobile and Client.

**K.     Entire Agreement.**  This Agreement sets forth the entire agreement between the Parties, and supersedes any other agreements between the Parties with respect to the terms hereof.  Any and all preliminary discussions, negotiations, documents and agreements of every kind whatsoever between the Parties are superseded hereby and of no further force or effect.  No person, firm or corporation has at any time had any authority to make any representations or promises on behalf of Terrasect Mobile or Client, and if any such representations or promises have been made, other than as contained herein, the Party receiving such promise or covenant hereby waives all right to rely thereon.  No verbal agreement, promise or representation shall be held to vary or add to the provisions of this Agreement.

IN WITNESS WHEREOF, the Parties have duly executed this Agreement as of the date first written above.

Terrasect Mobile                                            Client:  National Datacom, LLC

By:_____               By:_____

Date:_____               Date:_____

Name: John Wisniewsi                                   Name: John Clayton

Title: Partner, Terrasect Mobile                    Title: President, National Datacom, LLC

Address: 553 South Danyell Drive               Address: 2859 Trianna Street
        Chandler, AZ 85225                             North Port, FL 34291

Email: wisniewski915@gmail.com             Email: john.clayton@nationaldatacom.com

Mobile: 443-610-1594                                  Office: 813-628-9352

                                                                        Mobile: 321-354-4730

# *Schedule A*

This Schedule A is attached to and incorporated by reference in that certain Terrasect Mobile Agreement by and between Terrasect Mobile, LLC, ("Terrasect Mobile") and National Datacom, LLC. ("Client"), dated June 11, 2012 (the "Agreement").

**Summary of the Engagement**

Client engages Terrasect Mobile to engineer, build, upload a Network Toolkit App as detailed below. Terrasect Mobile and its contractors and subsidiaries will coordinate the development of said app with the Client's staff, subsidiaries and contractors as needed.

**<u>Terms</u>**

Start Date:          Feb 1, 2015

Application:          Network Toolkit

Fee Amount:          $300.00 total, as quoted including a retainer of $150 due within 30 days of the start date, with the remaining $150 due within 30 days of completion.

Description:          A Android platform network app toolkit designed for National Datacom with the following                                      capabilities; Network subnet calculator and chart, hexadecimal conversion, network information,                              ping and trace tests and a link to an external XML plug-in quoting site. Uploading to the Google                                      App Store is also included.

**<u>Notes</u>**

Delivery Schedule:    This Schedule comprises one delivery cycle which will begin immediately upon signature and continue through the software development period as defined above. Terrasect Mobile and its representatives will continue to work on the planning and development of the app on a as needed basis within compliance of this agreement and the Statement of Work.

Travel/Shipping:     Any additional or unexpected travel and shipping related expenses including labor incurred by Terrasect Mobile may be assessed upon approval of the Client.

*Statement of Work*

Terrasect Mobile will develop, engineer, upload and support for 30 days thereafter, the app described above in the Description section of Terms in Schedule A.

Additional services outside of the scope of this Agreement are available with reasonable notice at additional cost. Terrasect Mobile agrees to make every attempt to provide these services within the guidelines of the Service Level Agreement and Change order detailed in this document.

*Service Level Agreement*

Terrasect Mobile agrees to provide all services, products and support as detailed in the Schedule and Statement of Work to insure customer satisfaction. If service issues occur at the fault of Terrasect Mobile, the following credit structure will be employed with written request by the Client.

1. If the app or services fail to comply with the standards, compatibility, of an app store defined in Schedule A, within 30 days of completion and upload. Terresect Mobile with make the necessary software upgrades and changes for compliance and functionality of the app at its own cost.

2. Failure of delivery of Software Development related services, app functions, or products will result in the refund of payment for the applicable portion of the total contract value.

3. As noted above in Section 4 of the Terrasect Mobile Agreement, Terrasect Mobile is unable to make warranties related to the performance of the App Stores, Carrier Provided Networks, Wireless Networks, Internet itself, WAN connections or Client's Infrastructure. As such, this SLA applies to services related to the performance of the software and services provided and does not apply to issues that may occur beyond or outside of the control of Terrasect Mobile.

*Change Orders*

Additional services requested by the Client, beyond the scope of this Agreement are available for additional fees. Terrasect Mobile, with permission from the Client can assess these fees separate of this agreement thus releasing all parties of any obligations detailed in this Agreement for said additional services.

Material costs (aka hard costs) – Hard costs are defined as fees incurred by Terrasect Mobile to procure equipment, hardware, software, services, bandwidth, or related items needed to fulfill a change order. Hard costs resulting from changes occurring between the Client signature date and 30 days after the project's completion may be assessed at up to 25% additional margin. Hard

costs resulting from client's neglect or lack of cooperation during the development period may be assessed at up to 50% additional margin.

# Software Requirements

## Introduction

### Purpose

The purpose of this document is to present a detailed description of the Terrasect Mobile Appraisal Application. It will explain the purpose and features of the app, the interfaces of the app, what the app will do, the constraints under which it must operate and how the app will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to Terrasect for its approval.

### Scope of Project

This Application will be an appraisal app for our client of Terrasect. This Application will be designed  to make our clients appraisal easily accessible. By showing the user what they are appraised for allows our client to potentially receive more costumers not only because of convenience but for the great estimates as well.

This app will allow the user to be able to see how much they are approved for in a simplistic way. This app has a button that will send them a link to the main website allow the user to see everything they need to see.

### Overview of Document

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

## Overall Description

The application has four active authors and editors that will change the app based on the clients' needs. The user has access to this app through the app store to make their appraisal easier to receive. There will be a link to the original website.

### Functional Requirements

This section outlines the use cases for each of the active users separately. The users have only one use case apiece while the editor is main actor in this system.

1. Mobile Platform Compatible

    a. The application must be able to run properly on an Android device.

    b. The UI needs to be simple and easy to use.

    c. User interface elements must be able to resize depending on the screen size.

2. Ping Trace Tool

    a.

3. Hexadecimal Convertor

    a. Used to convert a decimal number to hexadecimal or vice versa.

4. Subnet Calculator

    a. A tool that when given an IP address and a subnet mask will return a chart displaying the available subnet.

5. Network Quote Tool

    a. A tool that simple connects to the client website and allows the user to estimate how much a network would cost to implement.
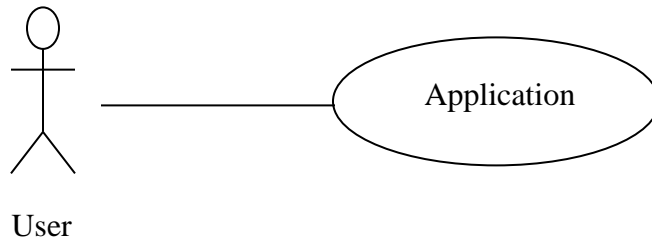
6. General Network Info Viewer

**Use Cases**

**Overall Use Case Diagram**
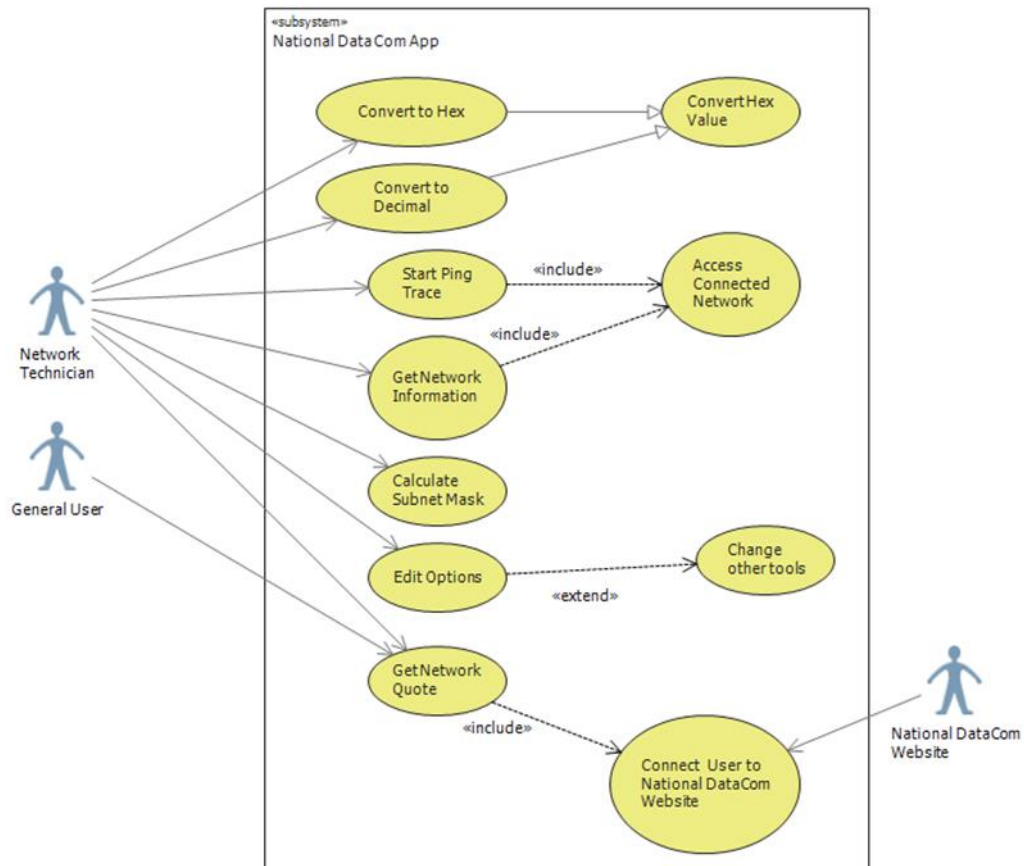
**Reader Use Case**
**Use case: App**
**Diagram:**



User

**Brief Description**
The User accesses the app in order to find best Quote.
**Initial Step-By-Step Description**
Before this use case can be initiated, the user will have to download the app

1. The User opens the app.
2. Then the user has option to click.
3. What the user picks decides if they go to the quote tool , the Hexa-Deciaml convertor, or the user goes to the website.
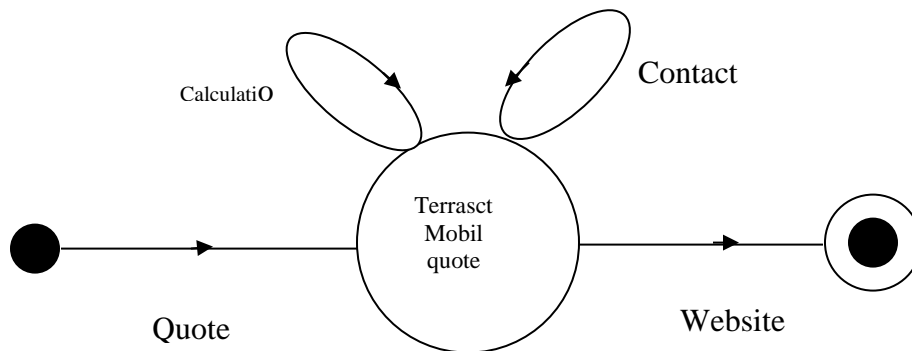4. The user then can user either of the tools.



**Figure 1 – Using the App**

The *Article Submission Process* state-transition diagram summarizes the use cases listed below. A user uses our app to get a correct quote. The app will then show them a quote and with give them the opportunity to go to the website for more quotes. The quotes will help the user figure out what is the appropriate quote and to see which service provider is better for them.

**User Use Case**
In this case to find out a quote the user must Click the Gain Quote option.

Use case: Gain Quote
**Diagram:**
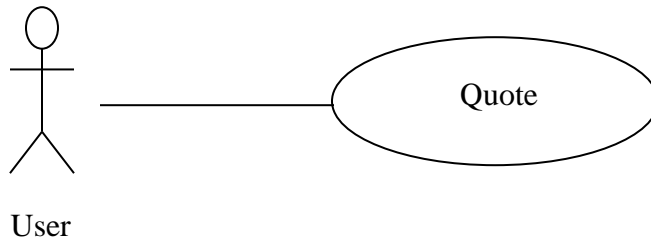


User

**Brief Description**
The user get a quote then can be transferred to the mobile site.

**Initial Step-By-Step Description**
After the user has the quote they can then go to the site to see different quotes for different areas.

1.  The user choses the quote tool.
2.  The app uses a hexa-decimal converter to show them their numbers.
3.  The user then sees what they were appraised for.
4.  The app then allows you to go to the mobile site.

**User Characteristics**

The User is there to find the right quote for their company in order to find the correct service provider. The application will have a quote tool and a button that will send them to the website in order to find quotes that are in their location.

The user it expected to know what they will be looking at, so that they are able to find the correct service provider which is given from the website.

**Non-Functional Requirements**

The application is very straight forward and is user friendly. The app is very simplistic and will allow the user to get what they need, such as; a quote, the main website, ping tool, or Hexa-decimal converter.

## Requirements Specification

### External Interface Requirements

The only link to an external system is the link to the National datacom website. The user

will use this site to find a quote that is needed in their area. This site was not made by us. We

only made the app. This app is practically a quote tool that the user can use to find the correct

service provider.

### Functional Requirements

The Logical Structure of the Data is contained in Section

**Using the app**

| Use Case Name | Using App |
|---|---|
| Trigger | The user accesses the app on the phone. |
| Precondition | The user downloaded the app |
| Basic Path | 1. The User chooses how to use the app.<br>2. The user will then use the quote tool to find out a correct service provider<br>3. If the user would like more options they will be sent to the main website that the app will have a link to. |
| Other | The app is there just to assist the user in finding a service provider. |

**Gain Quote**

| Use Case Name | Gain Quote |
|---|---|
| Trigger | The user selects the website link. |
| Precondition | The user will be sent to the online quotes. |
| Basic Path | The website will give the user all the information they need. |
| Other | None |

**Getting to the Website**

| Use Case Name | Getting Website |
|---|---|
| **Trigger** | The user will use the link that is in the app in order to get to the website |
| **Precondition** | The user has accessed the app through the app store. |
| **Basic Path** | 1. The app provides a link for the user.<br>2. The user selects the link.<br>3. The website give all the quotes needed. |
| **Alternative Paths** | None. |

**Detailed Non-Functional Requirements**

**Logical Structure of the App**

The logical structure of the data to be stored in the external National Datacom database is given below.
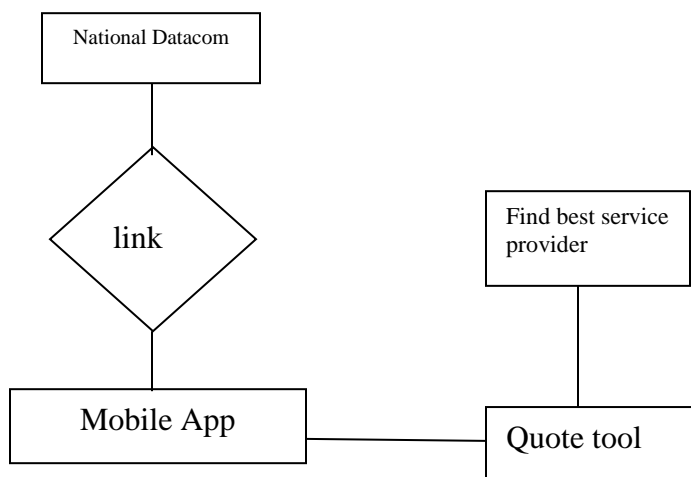


**Figure 2 - Logical Structure of the Terrasect Mobile App**

# Risk Management

## What might go wrong

1. The app may have a defect, thus not allowing us to use it properly.

We prepared for this by running the app multiple times while working on it in order to fix any of the bugs that have showed up

2. Our client could not like or understand the app.

We have stayed in contact with our client throughout the whole process showing him what we have made.

3. The app may not be user friendly.

We have made this app simplistic to the point where everything is explained for the user to understand.

4. The app does not do what is expected of it.

We talked with our client in order to stay on track and we have a specific set of guidelines so that we made it the way the client wants.

5. We do not have a lot of time to finish the project

We minimalized our project so that we would have time to finish our project, and if we needed to we could work after this class in order to add on more to the project.

## Anticipated Advantages

When we first started we could have taking advantage of unity 5 because it had better UI, because we did not have that at the time.

## Risk Avoidance Plan

Stay in contact with the client to find out if any risks do arise. We could have weekly meetings in order to stay on top of any risks or any coding issues.

## Risk Management Responsibilities

- Brandon Olson- The programmer, he has the responsibilities within the coding itself to help avoid any bugs or defects that the app may come in contact with.

- John Wisniewski – John stayed in contact with the client allowing use to make sure the app was made the correct way and had the correct specs.

- Xen Miller – Documentation, He made sure all the documentation was correct and up to par. He also put all the documentation together so it wasn't a maze of documents.

# Design Patterns

## Scene Based Interface Architecture

Scene based Interface architecture is having multiple scenes that hold different uses. For instance we had a scene for our hexadecimal convertor, ping tool, and website link. Doing this made the application run smooth and without having to reset all the setting if we chose to go back into the main screen. Giving a scene a single utility allows one utility to load at a time instead of loading all the utilities at one time. Doing this allowed our application to go to each utility faster. If we did not do this then we would have many issues with lag and going back to the home screen. Using one utility for one scene really made the application cleaner.

## Object Based Script Architecture

Object based script architecture is very closely related to Object-Oriented Programming. In the sense that now every object is a script. This allows the coding to become more simplistic and easier to work with. We did this with our Hexa-decimal converter. This way was much easier than any other way for our project.

# Lessons Learned

In doing this project our group learned that communication is one of the most important lessons. Communicating with the team members allows us to set up meetings for us to talk about the project and work on it together. Not only is the team important but the client is as well. One of our team members was able to contact the client at any time, which was beneficial to our team. Whenever we would have questions, we were able to contact our client to find out if what we were doing was okay. Not only did we learn how to communicate, but in doing this project we gained more knowledge of Unity and how to use it. The Application we created gave us some challenges, however we had time to go through the project and fix what went wrong allowing us to overcome that same issue in the future. Lastly planning out when to do documentation was very key. Even though we did not abide by this first gave us a struggle toward the end of the semester. Knowing this would have happened, would have forced us to do the documentation first, then work on our project. Overall this project has definitely helped out our team if we are to face this in the future.

## Final Interview

## About the Client

John Clayton is the owner of National Datacom. He is the owner. He has been a I.T professional for over 20 years. He has asked us to create a marketing tool that will help him have other I.T teams see what his business can offer. As these are the men and women that will understand that work on these networks daily, he would like to have a way to market to them.

## Clients Likes & Dislikes

### Clients Likes

- Easy to work with
- Always showing Progress
- Exactly what he wanted

### Clients Dislikes

- Distance from project

## Customer Review

The client is overall happy with what we were able to accomplish in under 14 weeks. He likes the easy layout that gets straight to the point. His company's logo is at the top and the quote is ready and available at the bottom. That is his main focus. Once he has his quoting webpage done, he cannot wait to release the application to the market. Further down the road he would like to work with team again if he gets a chance to see if there is an Iphone solution that can go on the Itunes store. This project was mainly focused on google products as they are easier to work with. He will also be providing a better logo that we will apply in the future.

# Summary

One of the very first things we did was get a client. Thankfully our teammate John Wisniewski new of someone that he could call that he knew needed help with creating some sort of software. Getting our client was probably the easiest part of our project. After we got our client we then started on the project because the client sent us the specifications and requirements that we needed to abide by in order to make the program he wanted. We finished the project fairly early which just left us with documentation. The Documentation is what took us the longest. In this final documentation we started off with what testing types we used, such as; Conversion testing, job stream testing, interface testing, security testing, recovery testing, performance testing, and acceptance testing. Next we talked about the feasibility of our project and we found out we could do it. However one of the most complicated objectives we had was making it multiplatform, it is possible, but at the same time it will take forever just to get it to become compatible for the Iphone. While we were created the project we also started debugging that way we could avoid a lot of risk that come into play if you don't test your project too often. From this project we learned a majority of tricks and tools that we can apply to future project. Last but not least was the final interview with our client, which went very well. Our client enjoyed everything about our project but did not enjoy how far away he was from his hired team. This project did have a great deal of work, but turned out to work well.

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