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| Pegasus%20-%20Black%20on%20White | Department of Electrical Engineering & Computer Science, CS DivisionCollege of Engineering & Computer ScienceUniversity of Central Florida |
| *Return Form to*: Dr. Mark Heinrich, heinrich@cs.ucf.edu |
| **COP 4934: Computer Science Senior Design** |
| **Proposed Project Description Form\*** |
| (Sponsors who are willing and able are asked to provide a Team Donation of $1500 or more for supplies and the running of the CS Senior Design Program) |
| Will support: Cannot support: (to the suggested degree) |
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| Sponsoring Organization: | Kennex LLC |
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| Mailing Address: | 2226 Gator Drive, Orlando Fl, 32807 |
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| Project Contact: | Chris Kiggins | Position: | Owner |
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| Contact Phone: | 855 553 6639 option 1 | Fax: | 855 553 6639 |
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| Contact E-mail: | Info@kennexsystems.com |
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| Project Title *(working)*: | Dimensional Calculator Application |

*Please feel free to use as much space as needed for each of the sections below.*

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| **Background of Company/Organization**(Provide a brief overview of the company/organization and the specific project location here) |
| Kennex was started by UCF alumni Chris Kiggins and Victoria Bealke to help modernize the art of transportation. By applying new technologies and techniques to current gaps in the logistics industry, Kennex is striving to become the first point of contact for any logistical need. Through the development of proprietary software and hardware, Kennex will become a household name within the decade. Further, Kennex is based in the only logical location for a forward thinking company; the cloud. Still in its infancy, there is a tremendous amount of growth potential within Kennex; potential we hope to share with anyone and everyone involved. |
| **Statement and Scope of the Problem(s)**(Provide the problem statement here; Please be as specific as possible to help us understand the scope of the problem, and thus the scope of the project, specifically the design content) |
| One of the largest issues in estimating the cost of shipping is accurately sizing the load. Most clients will try underrate their shipment. Many shippers attempt to protect themselves by overestimating shipments. These two factors often collide, leaving both sides weary and mistrustful of the other. By building a simple and accessible platform to help accurately determine the size of a load, Kennex can provide a solution to a large barrier present in the shipping industry. Many people in todays world have smartphones equipped with cameras; we would like to put such a widespread network to work by using those cameras to measure the physical sizes of varying loads, and using that data to in turn provide a total shipment price calculation. |
| **Overall Project Goal(s)**(Describe the overall goals of the project in this space) |
| The goal of this project is to build a stable working prototype application capable of using a camera to accurately measure the dimensions of a particular mass. The application will also need to effectively and efficiently export data to a remote server for crosscheck and operator analysis. It needs to have a simple UI that is robust and intuitive, providing needed instruction to the user in a non-invasive fashion. |
| **Project Objectives**(Enter the project objectives that will help achieve the goals of the project; Please be as specific as possible) |
| - Develop a method (or algorithm) for selecting or detecting a particular mass and isolating it from the rest of a picture taken by an integated camera.- Develop an algorithm that can utilize photographic data to provide an accurate (+/- 1" per 3ft) dimensional estimate.- Establish a resilient form of data transfer between a users mobile device and a remote server that can support encryption.-Develop a UI that your technologically challenged grandparents could operate- Must be able to utilize a 3g connection for data transfer. |
| **Expected Project Deliverables**(Enter the expected project deliverables including, if possible, proposed project tasks; Please be as specific as possible) |
| The end goal of this project is to develop a working android application that can take a photo, in application, and use a combination of photographic data and user input to provide a data file with enough data points to calculate the dimensions of a particular item or items on an external server.  |
| **Desired Core Competencies and Experience of Team**(Please list the desired competencies/experience/knowledge needed by the project team members that you feel will facilitate successful project execution; Examples: specific programming language experience, familiarity or expertise in certain web technologies, databases, mobile SDKs, prior classes in certain subject areas, a love of computational complexity and efficient algorithms etc.) |
| Mobile platform experience and/or familiarity Familiarity with vpn design and implementationA desire to grow with the project until public commercializationCreative and unorthodox methods and approaches to challengesAn understanding of common file formats for photographic dataAn understanding of encryption methodologies and practices |
| **Other Special Considerations and Project Requirements**(Please provide any special circumstances, constraints, and requirements needed by the project team members; **Examples**:* University participants must be US Citizens or Permanent Residents,
* All work is to be performed off-campus at a specific site,
* *Interdisciplinary project*: You would like to see CS students teamed with engineering students from one or more of: Computer Engineering, Electrical Engineering, Mechanical Engineering, Industrial Engineering, Civil and Environmental Engineering (please specify)
* All team members and the professor must submit to background checks,
* All team members and the professor must sign non-disclosure agreements
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| Just need the team to sign non-disclosure and non-competition agreements. |
| **Project Mentor(s), if different than who is listed above**(Please provide the contact information and title/position for the project mentor(s), who will advise the student team) |
| Chris Kiggins |

*\*IMPORTANT NOTE: Proposed projects may not be chosen by student groups. In any one semester the number of potential industry-sponsored, faculty-proposed, or student-funded projects may exceed the number of student teams. If this project proposal is approved by Dr. Heinrich as a potential CS Senior Design project, you or an appropriate representative will be asked to come to class and give a 15-minute project pitch to the students. Keep in mind this is your chance to convince the students why they should pick your proposed project. Think about what is in it for them, what technologies they will get exposed to, what are the broader, enduring, and social impacts of the work, etc. If your project is chosen, you will be notified typically by the 4th week of the semester. If your project is not chosen, you will be notified in the same timeframe and if it makes sense for your timeline, we would love to offer the same project in the next semester.*