SDSMT SENIOR DESIGN
SOFTWARE DEVELOPMENT AGREEMENT

This Software Development Agreement (the "Agreement") is made between the SDSMT Computer Science Senior Design Team "Crowd Science Mapper", consisting of team members Hannah Aker and Jiasong Yan, and Sponsors Dr.Mengyu Qiao and Gail Schmidt, with address: 501 E. Saint Joeseph Street, Rapid City, SD, 57701.

1   RECITALS

1. Sponsor desires Senior Design Team to develop a set of generic crowdsourcing system framework and toolkits, which can be customized by ordinary users with no programming experience using graphical user interface.
2. Senior Design Teams willing to develop such Software.

NOW, THEREFORE, in consideration of the mutual covenants and promises herein contained, the Team and Sponsor agree as follows:

2   EFFECTIVE DATE

This Agreement shall be effective as of September 14, 2015.

3   DEFINITIONS

1. "Software" shall mean the computer programs in machine readable object code form and any subsequent error corrections or updates supplied to Sponsor by Senior Design Team pursuant to this Agreement.

4   DEVELOPMENT OF SOFTWARE

1. Senior Design Team will use its best efforts to develop the Software described in the Crowd Science Mapper project description. The Software development will be under the direction of or his/her successors as mutually agreed to by the parties ("Team Lead") and will be conducted by the Team Lead. The Team will deliver the Software to the satisfaction of the course instructor that reasonable effort has been made to address the needs of the client. The Team understands that failure to deliver the Software is grounds for failing the course.
2. Sponsor understands that the Senior Design course's mission is education and advancement of knowledge, and, consequently, the development of Software must further that mission. The Senior Design Course does not guarantee specific results or any results, and the Software will be developed only on a best efforts basis. The Software is considered PROOF OF CONCEPT only and is NOT intended for commercial, medical, mission critical or industrial applications.
3. The Senior Design instructor will act as mediator between Sponsor and Team; and resolve any conflicts that may arise.

5   COMPENSATION

No Compensation

6   CONSULTATION AND REPORTS

1. Sponsor's designated representative for consultation and communications with the Team Lead shall be Dr. Mengyu Qiao or such other person as Sponsor may from time to time designate to the Team Lead ("Designated Representative").

2. During the Term of the Agreement, Sponsor's representatives may consult informally with course instructor regarding the project, both personally and by telephone. Access to work carried on in University facilities, if any, in the course of this Agreement shall be entirely under the control of University personnel but shall be made available on a reasonable basis.

3. The Team Lead will submit written progress reports. At the conclusion of this Agreement, the Team Lead shall submit a comprehensive final report in the form of the formal course documentation at the conclusion of the Senior Design II course.

7   CONFIDENTIAL INFORMATION

1. The parties may wish, from time to time, in connection with work contemplated under this Agreement, to disclose confidential information to each other ("Confidential Information"). Each party will use reasonable efforts to prevent the disclosure of any of the other party's Confidential Information to third parties for a period of three (3) years after the termination of this Agreement, provided that the recipient party's obligation shall not apply to information that:

   (a) is not disclosed in writing or reduced to writing and so marked with an appropriate confidentiality legend within thirty (30) days of disclosure;

   (b) is already in the recipient party's possession at the time of disclosure thereof;

   (c) is or later becomes part of the public domain through no fault of the recipient party;

   (d) is received from a third party having no obligations of confidentiality to the disclosing party;

   (e) is independently developed by the recipient party; or

   (f) is required by law or regulation to be disclosed.

2. In the event that information is required to be disclosed pursuant to subsection (6), the party required to make disclosure shall notify the other to allow that party to assert whatever exclusions or exemptions may be available to it under such law or regulation.

8   INTELLECTUAL PROPERTY RIGHTS

All deliverables become property of South Dakota School of Mines and Technology.

9   WARRANTIES

The Senior Design Team represents and warrants to Sponsor that:

1. the Software is the original work of the Senior Design Team in each and all aspects;

2. the Software and its use do not infringe any copyright or trade secret rights of any third party.

No agreements will be made beyond items (1) and (2).

10 INDEMNITY

1. Sponsor is responsible for claims and damages, losses or expenses held against the Sponsor.

2. Sponsor shall indemnify and hold harmless the Senior Design Team, its affiliated companies and the officers, agents, directors and employees of the same from any and all claims and damages, losses or expenses, including attorney's fees, caused by any negligent act of Sponsor or any of Sponsor's agents, employees, subcontractors, or suppliers.

3. NEITHER PARTY TO THIS AGREEMENT NOR THEIR AFFILIATED COMPANIES, NOR THE OFFICERS, AGENTS, STUDENTS AND EMPLOYEES OF ANY OF THE FOREGOING, SHALL BE LIABLE TO ANY OTHER PARTY HERETO IN ANY ACTION OR CLAIM FOR CONSEQUENTIAL OR SPECIAL DAMAGES, LOSS OF PROFITS, LOSS OF OPPORTUNITY, LOSS OF PRODUCT OR LOSS OF USE, WHETHER THE ACTION IN WHICH RECOVERY OF DAMAGES IS SOUGHT IS BASED ON CONTRACT TORT (INCLUDING SOLE, CONCURRENT OR OTHER NEGLIGENCE AND STRICT LIABILITY), STATUTE OR OTHERWISE. TO THE EXTENT PERMITTED BY LAW, ANY STATUTORY REMEDIES WHICH ARE INCONSISTENT WITH THE PROVISIONS OF THESE TERMS ARE WAIVED.

11 INDEPENDENT CONTRACTOR

For the purposes of this Agreement and all services to be provided hereunder, the parties shall be, and shall be deemed to be, independent contractors and not agents or employees of the other party. Neither party shall have authority to make any statements, representations or commitments of any kind, or to take any action which shall be binding on the other party, except as may be expressly provided for herein or authorized in writing.

12 TERM AND TERMINATION

1. This Agreement shall commence on the Effective Date and extend until the end of classes of the second semester of Senior Design (CSC 465), unless sooner terminated in accordance with the provisions of this Section ("Term").

2. This Agreement may be terminated by the written agreement of both parties.

3. In the event that either party shall be in default of its materials obligations under this Agreement and shall fail to remedy such default within thirty (30) days after receipt of written notice thereof, this Agreement shall terminate upon expiration of the thirty (30) day period.

4. Any provisions of this Agreement which by their nature extend beyond termination shall survive such termination.

13 ATTACHMENTS

Attachment "Crowd Science Mapper Project Description" is incorporated in this Agreement.

14 GENERAL

1. This Agreement constitutes the entire and only agreement between the parties relating to the Senior Design Course, and all prior negotiations, representations, agreements and understandings are superseded hereby.

No agreements altering or supplementing the terms hereof may be made except by means of a written document signed by the duly authorized representatives of the parties.

2. This Agreement shall be governed by, construed, and enforced in accordance with the internal laws of the State of South Dakota.

15   SIGNATURES

_____	_____
Hannah Aker	Date

_____	_____
Jiasong Yan	Date

_____	_____
Dr. Megyu Qiao	Date

_____	_____
Gail Schmidt	Date

Project Title: Crowd Science Mapper

Proposed/Advised by: Dr. Mengyu Qiao

Sponsored by:

Project Description:

Crowd Science (also known as Citizen Science) aims at soliciting ideas, findings, and information to support scientific research, which could reduce time and cost for data acquisition and enhance the accuracy and generality of research results. Inspired by USGS Did You Feel It (DYFI) project, USGS Butterflies and Moths of North America (BAMONA) project, and Cornell's eBird project, a group of professors and students from SDSM&T partnered with SGT, Inc. to develop a Landscape Change Mapper (LC Mapper) system, which provides a mechanism for citizens and scientists to identify and track landscape change, thus extending the observational resources available to scientists and deepening the awareness and understanding of ecological issues by the public participants.

In recognition of the growing demand for crowdsourcing in scientific research and the commonalities in various websites relying on citizens to assist in tracking and reporting science as it is happening, it will be helpful to develop a set of generic crowdsourcing system framework and toolkits, which can be customized by ordinary users with no programming experience using graphical user interface. The configurable features of the framework may include user input and display items, database design, digital map, webpage color and style, logo, etc.

The Crowd Science Mapper will be a proof-of-concept project which spans across the areas of GIS/geospatial, cloud, crowd sourcing, citizen science, mobile applications, agile development, open source software, and open source data. The expected product comprises three components: 1) a configurable website that allows public participants to report and view events with visual help of a digital map; 2) a configurable mobile application with the same core features of the public website; 3) an administration website that allows administrators to customize and modify the public system design using graphical user interface, and allows scientists and moderators to control and analyze users' reports.

Useful links:
USGS Did You Feel It website: http://earthquake.usgs.gov/earthquakes/dyfi
USGS Butterflies and Moths of North America website: http://www.butterfliesandmoths.org
Cornell's eBird website: http://ebird.org/content/ebird
SDSM&T-SGT Landscape Change Mapper website: http://54.244.242.86/

Project Duration: Two semesters.

Technical Areas Encompassed: 1. Web development; 2. Database, 3 Mobile development

Any other special requirements:

Number of Students/Disciplines required: 4 * CS