

ArcGIS Pro Add-in 1.0

Goal: Goal of the project is to make a GlobeSpotter integration in ArcGISPro

From: Harm Bruinsma

Date: 15-04-2016

Participants

The table below lists all Participants. Communicate updates of this document to all Participants, at least once per 2 weeks and at least by email.

| Role | Name | Short name | Estimated hours | Remarks |
|-----------------|---|----------------------------|-----------------|---------|
| Customer '1 | Marcel de Vries | MdV | | |
| Team Lead '1 | Harro Jacobs | HJa | | |
| Cluster Lead '1 | Sjoerd Brandsma | SBr | | |
| Project Lead '1 | Harm Bruinsma | HBr | | |
| Architect | Harm Bruinsma | HBr | | |
| Developer '1 | Harm Bruinsma | HBr | | |
| Observer | Sjoerd Brandsma, Hans van Eijk Tony Verlaan Bart Beers | SBr, HvE, TvE BBe | | |

Versions

| Version | Date | Author | Remarks |
|---------|------------|---------------|------------------|
| 1 | 09/07/2015 | Harm Bruinsma | Initial version |
| 2 | 15/07/2015 | Harm Bruinsma | Updated version |
| 3 | 21/09/2015 | Harm Bruinsma | Updated version |
| 4 | 06/10/2015 | Harm Bruinsma | Updated version |
| 5 | 20/11/2015 | Harm Bruinsma | Updated version |
| 6 | 21/12/2015 | Harm Bruinsma | Updated planning |
| 7 | 18/01/2016 | Harm Bruinsma | Updated planning |
| 8 | 04/03/2016 | Harm Bruinsma | Updated planning |
| 9 | 15/04/2016 | Harm Bruinsma | Updated planning |

Planning of phases and deliverables

| ID | Phases or deliverable | Wk | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
|----|--|----|------|-----|------|------|------|-----|------|------|------|------|-----|------|------|-------|------|-------|-------|
| | | Mo | 29-6 | 6-7 | 13-7 | 20-7 | 27-7 | 3-8 | 10-8 | 17-8 | 24-8 | 31-8 | 7-9 | 14-9 | 21-9 | 28-10 | 5-11 | 12-11 | 19-11 |
| 1 | Agreed phase 1 (scope, requirements and planning) | | | | | | | | | | | | | | | | | | |
| 2 | Agreed phase 2 (solution approach and test plan) | | | | | | | | | | | | | | | | | | |
| 3 | All (development) activities bundled in a breakdown of agreed deliverables | | | | | | | | | | | | | | | | | | |
| 3a | Create a basic framework | | | | | | | | | | | | | | | | | | |
| 3b | Implement the recent cyclorama layer functionality. | | | | | | | | | | | | | | | | | | |

| ID | Phases or deliverable | Wk | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|--|----|-------|------|------|-------|-------|-------|------|-------|-------|------|------|------|------|------|------|-------|------|
| | | Mo | 26-11 | 2-11 | 9-11 | 16-11 | 23-11 | 30-11 | 7-12 | 14-12 | 21-12 | 1-12 | 04-1 | 11-1 | 18-1 | 25-1 | 02-2 | 08-12 | 15-2 |
| 3b | Implement the recent cyclorama layer functionality. | | | | | | | | | | | | | | | | | | |
| 3c | Implement the historical cyclorama layer functionality, include the historical slider. | | | | | | | | | | | | | | | | | | |
| 3d | Implement the GlobeSpotter window | | | | | | | | | | | | | | | | | | |
| 3e | Implement the viewing cone | | | | | | | | | | | | | | | | | | |

| ID | Phases or deliverable | Wk | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|----|--|----|------|------|------|------|------|------|------|------|------|------|-----|-----|------|------|------|-----|------|
| | | Mo | 22-2 | 29-2 | 07-3 | 14-3 | 21-3 | 28-3 | 04-4 | 11-4 | 18-4 | 25-4 | 2-5 | 9-5 | 16-5 | 23-5 | 30-5 | 6-6 | 13-6 |
| 3c | Implement the historical cyclorama layer functionality, include the historical slider. | | | | | | | | | | | | | | | | | | |
| 3d | Implement the GlobeSpotter window | | | | | | | | | | | | | | | | | | |
| 3f | Implement the Agreement window | | | | | | | | | | | | | | | | | | |
| 3g | Implement the cyclorama search functionality | | | | | | | | | | | | | | | | | | |
| 3h | Implement the vector layer functionality | | | | | | | | | | | | | | | | | | |
| 3i | Implement the measuring functionality | | | | | | | | | | | | | | | | | | |
| 3j | Add a help button with help information | | | | | | | | | | | | | | | | | | |
| 3k | Make an installation manual | | | | | | | | | | | | | | | | | | |
| 4 | Formal test that all requirements are met | | | | | | | | | | | | | | | | | | |

| ID | Phases or deliverable | Wk | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
|----|--|----|------|------|------|------|------|------|-----|-----|------|------|------|-----|------|------|------|------|-------|
| | | Mo | 20-6 | 27-6 | 4-7 | 11-7 | 18-7 | 25-7 | 1-8 | 8-8 | 15-8 | 22-8 | 29-8 | 5-9 | 12-9 | 19-9 | 26-9 | 3-10 | 10-10 |
| 3i | Implement the measuring functionality | | | | | | | | | | | | | | | | | | |
| 3j | Add a help button with help information | | | | | | | | | | | | | | | | | | |
| 3k | Make an installation manual | | | | | | | | | | | | | | | | | | |
| 4 | Formal test that all requirements are met | | | | | | | | | | | | | | | | | | |
| 5 | Documentation updated | | | | | | | | | | | | | | | | | | |
| 6 | Documentation review & Code review | | | | | | | | | | | | | | | | | | |
| 7 | Release <Record release date> | | | | 4/7 | | | | | | | | | | | | | | |
| 8 | Formal handover to the customer that the Project is completed including a filled project satisfaction survey¹ <Record handover date> | | | | 11/7 | | | | | | | | | | | | | | |

Action points

| Id | Action | Owner | Status ¹ | Remarks |
|----|--|-------|---------------------|---|
| 1 | Install ArcGIS Pro 1.1 and the ArcGIS Pro SDK | HBr | Done | |
| 2 | Investigate how to use Add-Ins in ArcGIS Pro | HBr | Done | |
| 3 | Investigate how to use flash in ArcGIS Pro | HBr | Done | We use flash now, but in the next version, we will use HTML 5. |
| 4 | Investigate how to use property property pages in ArcGIS Pro | HBr | Done | The need to use property pages for the GlobeSpotter settings form |
| 5 | Investigate how we can take over the styling of text in ArcGIS Pro | HBr | Done | |
| 6 | Investigate how the styling of objects of the map is working in ArcGIS Pro | HBr | Done | |
| 7 | Investigate how we can draw and update feature layers on the map in ArcGIS Pro | HBr | Done | |
| 8 | Investigate how we can draw static objects on the map in ArcGIS Pro | HBr | Done | |
| 9 | Investigate how measurement is working in ArcGIS Pro and how we can use it | HBr | | |
| 10 | Create a Git repository for the GlobeSpotter for ArcGISPro integration code | HBr | Done | |
| 11 | Test the recent cyclorama layer functionality | HBr | | |
| 12 | Test the historical cyclorama layer functionality | HBr | | |
| 13 | Test the GlobeSpotter functionality | HBr | | |
| 14 | Test the vector layer overlay functionality | HBr | | |
| 15 | Test the cyclorama search functionality | HBr | | |
| 16 | Test the measurement functionality | HBr | | |
| 17 | Test the local installation | JKe | | |
| 18 | Formally hand over GlobeSpotter for ArcGISPro release | HBr | | |

¹ Open / Pending / Done / Cancelled

Scope, requirements and Planning

| Id | Actor | Feature | Purpose | Comment | Priority |
|----|-----------|--|--|---------------------|----------|
| 1 | As a user | I would like to set the login info once (username and password) | The user should not have to log in each time. | | M |
| 2 | As a user | I would like to use different coordinate systems around the world | The add-in must be able to be used anywhere in the world. | | M |
| 3 | As a user | The coordinate systems for the map and the cyclorama doesn't need to be the same | The add-in must be flexible in the use of coordinate systems. | | M |
| 4 | As a user | The max cyclorama viewers which have to be open at the same time can be set manual and the maximum number of cyclorama viewers which can be opened at the same time is 4 | Flexible use of the number of cyclorama viewers. | | M |
| 5 | As a user | I would like to see point, line and surface vector data overlays in the cyclorama | The add-in must support overlays. | | M |
| 6 | As a user | I would like to use styling for point, line and surface overlay data | ArcGIS pro supports also styling. | Styling is optional | C |
| 7 | As a user | I would like to be able to switch the vector layers in the cyclorama on and off | The visibility of the layers on the map and the cyclorama have to work independently of each other. | | M |
| 8 | As a user | The maximum distance where you see a vector layer in the cyclorama is a setting that you can turn on and off. The default distance is 30 meters | Otherwise, the vector layers are too cluttered in the cyclorama, and the add-in is too slow. | | M |
| 9 | As a user | I would like to see the identity information of a vector layer if I click on the vector layer in the cyclorama | If you click on the map you can see the vector information, so if you click on the cyclorama you must also see the vector information. | | M |
| 10 | As a user | I would like to see detail images in the cyclorama | Some users of the add-in are also customers of detail images. | | S |
| 11 | As a user | I would like to see on the map if a recording contains detail images | Some users of the add-in are also customers of detail images. | | S |
| 12 | As a user | I would like to make a local installation | Some users use local storage. | | M |
| 13 | As a user | I would like to use a proxy server | Some users use a proxy server. | | M |
| 14 | As a user | I would like to see about information | To inform the user about the GlobeSpotter Add-in. | | M |
| 15 | As a user | I would like to see the agreement information, when I log in for the first time | To inform the user about the Agreement. | | M |
| 16 | As a user | I would like to see the agreement information all the time I want | To inform the user about the agreement. | | M |
| 17 | As a user | If I reach a zoom level of 1:2000, I would like to see recordings | If you see a dot recording at high zoom level, then it will be | | M |

| | | | | | |
|----|-----------|---|---|---------------------------------|---|
| | | | too cluttered. | | |
| 18 | As a user | I would like to turn the recording layer on the map on and off | The visibility of the recording layers on the map and the cyclorama have to work independently of each other. | | M |
| 19 | As a user | I would like to turn the recording layer in the cyclorama on and off | The visibility of the layers on the map and the cyclorama have to work independently of each other. | | M |
| 20 | As a user | I would like to see the historical recordings | Historical recordings is also a feature of the ArcGIS Desktop add-in. | | M |
| 21 | As a user | I would like to set the date range of the historical recordings | Historical recordings is also a feature of the ArcGIS Desktop add-in. | | M |
| 22 | As a user | If I don't have access rights to a cyclorama, I would like to see that on the map | A user may be informed that he should not have access to an image. | | S |
| 23 | As a user | If I click on a recording, I would like to see the image | This is standard functionality of the ArcGIS Desktop add-in and GlobeSpotter. | | M |
| 24 | As a user | If I open an image, I would like to see a viewing cone. The viewing cone is in the viewing direction. | This is standard functionality of the ArcGIS Desktop add-in and GlobeSpotter. | | M |
| 25 | As a user | I would like to search for an image with an imageld. | Then it is easier to find an image. | | S |
| 26 | As a user | I would like to make a point measurement | Measurements is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 27 | As a user | I would like to make a line measurement | Measurements is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 28 | As a user | I would like to make a surface measurement | Measurements is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 29 | As a user | I would like to make a volume measurement | Volume measurement is also a functionality of GlobeSpotter. | Volume measurement is optional. | C |
| 30 | As a user | I would like to update observation points in a measurement | Measurements is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 31 | As a user | I would like to remove a measurement | Measurements is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 32 | As a user | I would like to remove observation points in a measurement | Measurement is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 33 | As a user | I would like to make a smart-click measurement | Measurement is also a standard feature of the ArcGIS Desktop add-in. | | M |
| 34 | As a user | I would like to see the help information | Help information is also a standard feature of the ArcGIS | | M |

| | | | | | |
|----|-----------|--|---|-----------------------------|---|
| | | | Desktop add-in. | | |
| 35 | As a user | I would like to use both feet and meters | This functionality is for use in the United States. | | M |
| 36 | As a user | I would like to make a report | This is also functionality GlobeSpotter. | Create a report is optional | W |

*MoSCoW is used to define Priority to reach a common understanding with stakeholders on the importance they place on the delivery of each requirement.

(M)UST Describes a requirement that must be satisfied in the final solution for the solution to be considered a success.

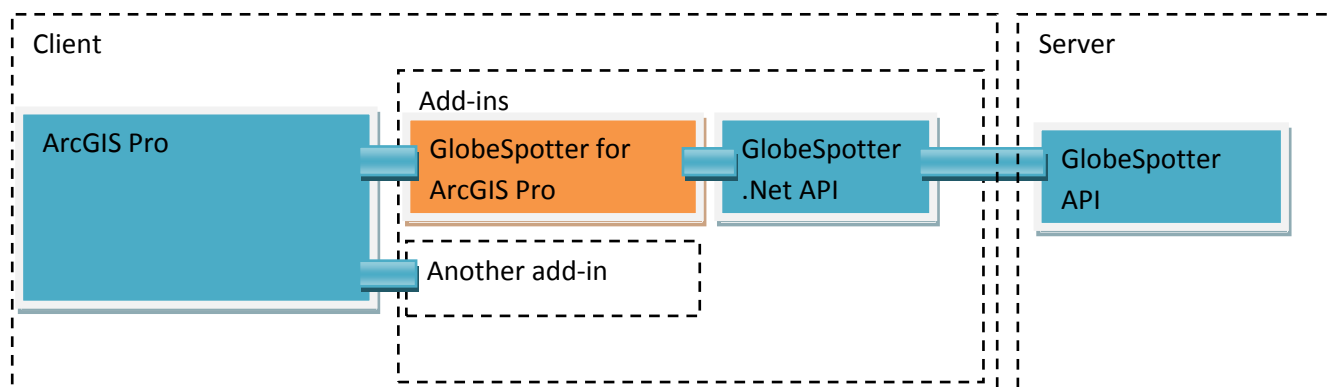
(S)HOULD Represents a high-priority item that should be included in the solution if it is possible. This is often a critical requirement but one which can be satisfied in other ways if strictly necessary.

(C)OULD Describes a requirement which is considered desirable but not necessary. This will be included if time and resources permit.

(W)ould or Won't Represents a requirement that stakeholders have agreed will not be implemented in a given release, but may be considered for the future>

Solution approach

GlobeSpotter for ArcGIS Pro is an Add-in in ArcGIS pro. The following figure shows a schematic representation. The orange box is the part that is made in this project.



Test approach

The way the GlobeSpotter for ArcGIS desktop Add-In will be tested:

- Automatic testing: we use an automatic testing tool: Sikuli.
- The customer (Marcel de Vries) must make time for functional testing.
- In a later stage. We may ask external customers to test a beta version of the add-in.

Test results

<describe test results that proof that all requirements are met >

Communication

Standard R&D project communication:

Marcel de Vries is the customer, and with him I occasionally discuss the progress of the project. This consultation takes just occasionally place behind the computer.

Communicate updates of this document to all Participants and at least once per two weeks by email.

This email have a short review of the last two weeks and the planning of the work for the coming two weeks.

Evaluation results

<Fill the satisfaction survey results "V" and improvement proposals as proposed>

Accomplished goals

In your opinion are the project goals achieved?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Time scales

In your opinion are the deliverables met within the set deadlines?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Communication

In your opinion are you sufficiently informed of the project progress?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Test results

In your opinion are the project results sufficiently tested to decrease project risks?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Suggestions for improvement

Sustainability of project goals

In your opinion did the project goals change during the project?

Not ☐
Very few ☐
Few ☐
Some ☐
Many ☐

Time scales

In your opinion were the deadlines of the deliverables realistic?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Communication

In your opinion did you get sufficient feedback from the customer(s) of the project?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Test results

In your opinion were the project participants sufficiently involved in the functional testing of the project?

Entirely ☐
Mostly ☐
Partially ☐
Limited ☐
Not ☐

Suggestions for improvement