

**2013 Esri Europe, Middle East and Africa
User Conference**

October 23-25, 2013 | Munich, Germany

**Esri Summer Camps in Rwanda
and
the Democratic Republic of Congo**

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The goals of Esri Summer Camps

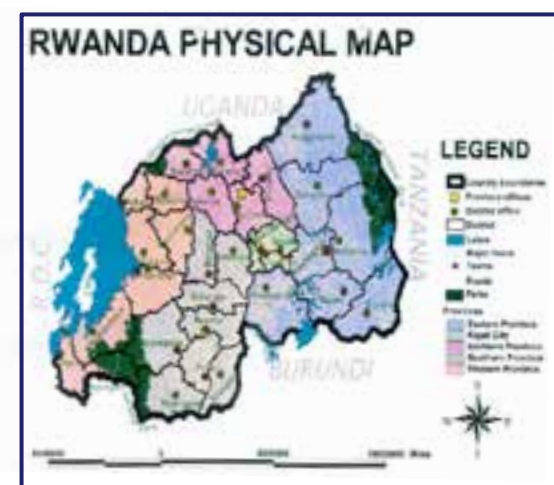
Observe – Understand - Apply

- + The Summer Camp is an applied GIS project
- + Link GIS theory learned at school with practical work in the field
- + Learn how to use a GPS
- + Collect geographic and attribute data with GPS and questionnaires
- + Prepare, edit, analyse and visualize data using GIS
- + Learn how to present results
- + Close collaboration with an institution (e.g. Ministries and Educational bodies), local and international GIS experts

Conduct a real project within a week with high school pupils

The structure of the project in general

- + A topic is defined together with a Partner
- + Each year Esri Rwanda launches a "Map Competition" by inviting secondary school pupils to submit a GIS map and a motivation letter
- + Usually 150 to 200 pupils participate in the map competition
- + A committee led by Esri Rwanda selects the twenty best submissions
- + The top twenty pupils are invited to participate in the Summer Camp



Esri Summer Camp Schedule

Time	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday			
07:00	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast			
08:00	Opening Ceremony	Field work	Field work	Computer Lab Download data	Computer Lab Visualise data GIS Group work	Computer Lab GIS Group work	Closing Ceremony			
09:00	Introduction to the Summer Camp topic						Presentations			
10.30	Coffee/Tea Break						Coffee/Tea Break	Coffee/Tea Break	Coffee/Tea Break	Speeches
11:00	Introduction to GIS						Data Evaluation	Computer Lab GIS Group work	Computer Lab GIS Group work	Cocktail
13:00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch			
14:00	Introduction to GPS	Field work	Field work	Data Editing	Computer Lab GIS Group work	Preparation of presentations	Sports			
15:30	Coffee/Tea Break			Coffee/Tea Break				Coffee/Tea Break		
16:00	Geocaching and practical exercises			Computer Lab Data Editing				Computer Lab GIS Group work	Dry-run of presentations	
17:00	Preparation of Fieldwork									
18:00										
19:00	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner			
20:00	Entertainment	Entertainment	Entertainment	Entertainment	Entertainment	Entertainment	Entertainment			

The Esri Summer Camps at a glance

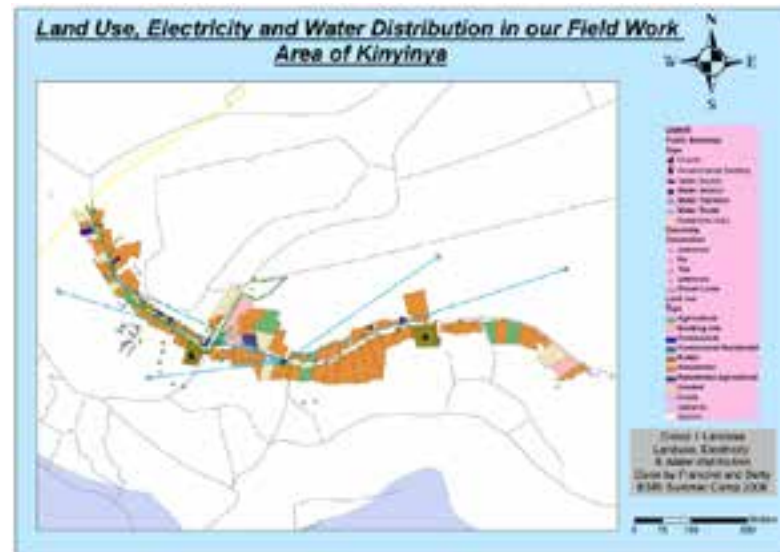
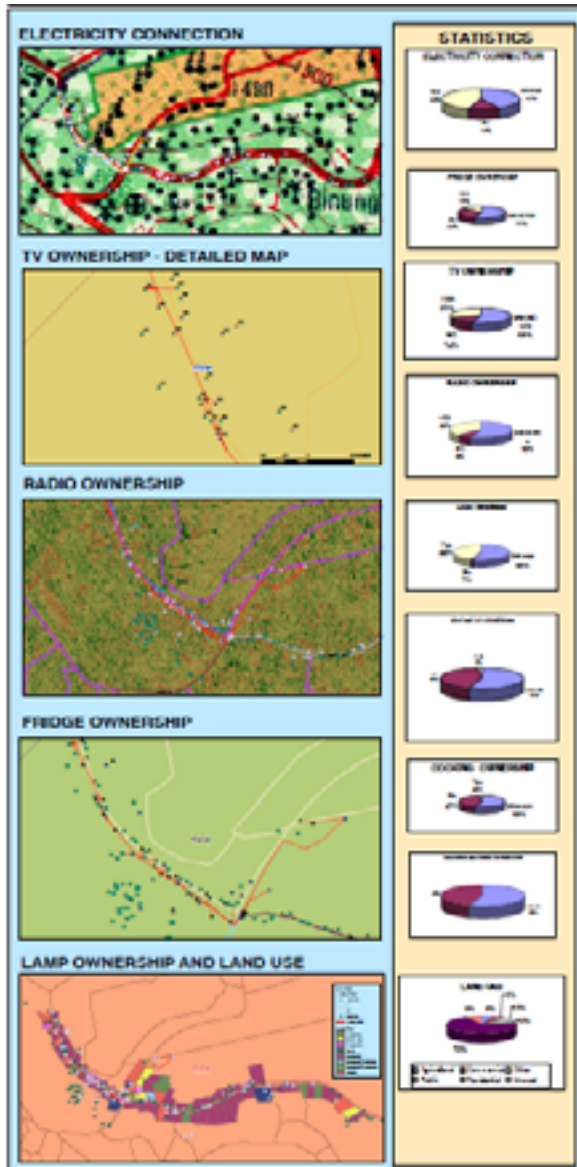
The first ESRI Summer Camp 2008:

Structural Analysis at the City Border of Kigali (Sector Kinyinya, Gasabo District)

- + Data collection and inventory control: Land use, water and electricity distribution
- + Partner Gasabo District, CGIS-NUR, RNRA (former NLC)



Esri Summer Camp 2008: The results in posters and maps



The Esri Summer Camps at a glance

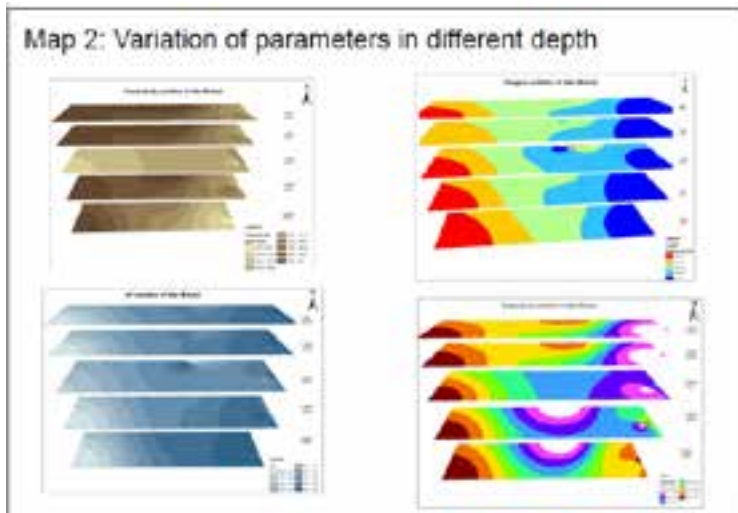
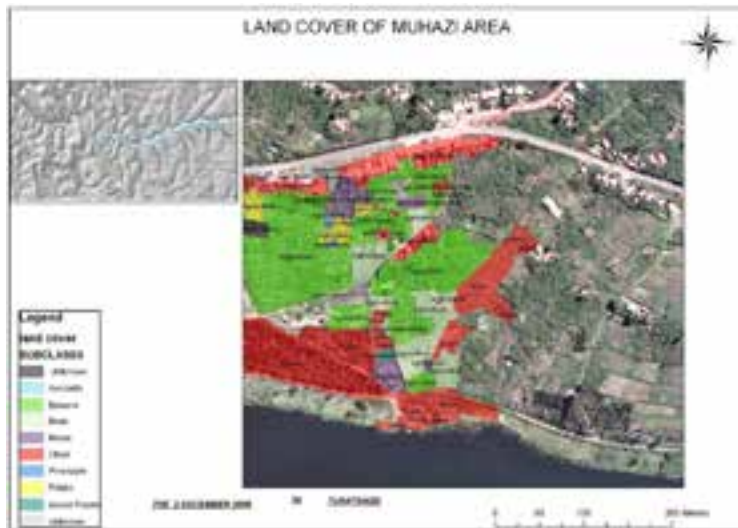
The second ESRI Summer Camp 2009:

Environmental situation at Lake Muhazi

- + Data Collection: Water quality analysis, land use at the shores of the lake, living conditions of the population
- + Partners: REMA (Rwanda Environmental Management Agency),
CGIS-NUR, RNRA



Esri Summer Camp 2009: The results presented in maps



The Esri Summer Camps at a glance

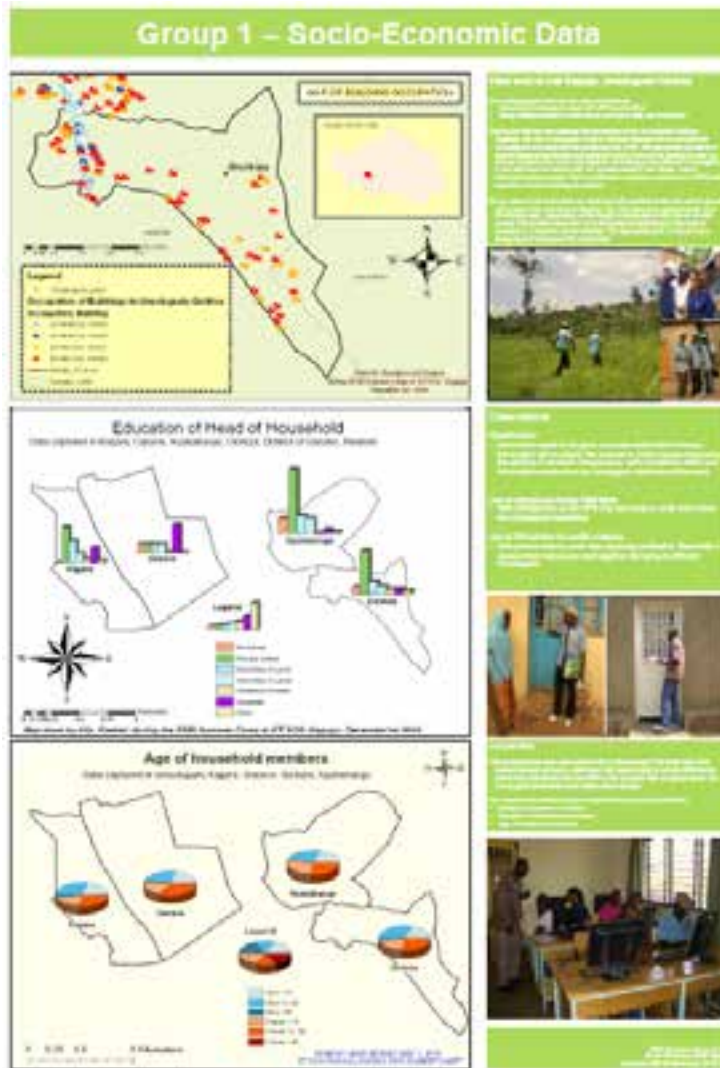
The third ESRI Summer Camp 2010:

Population Census

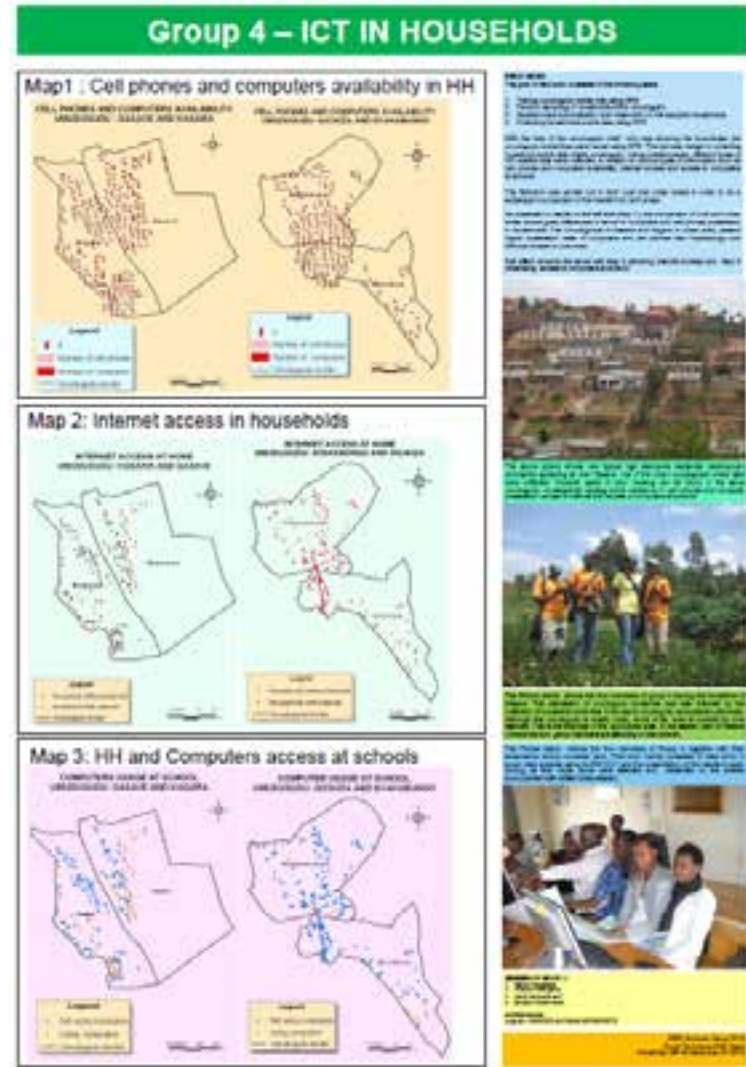
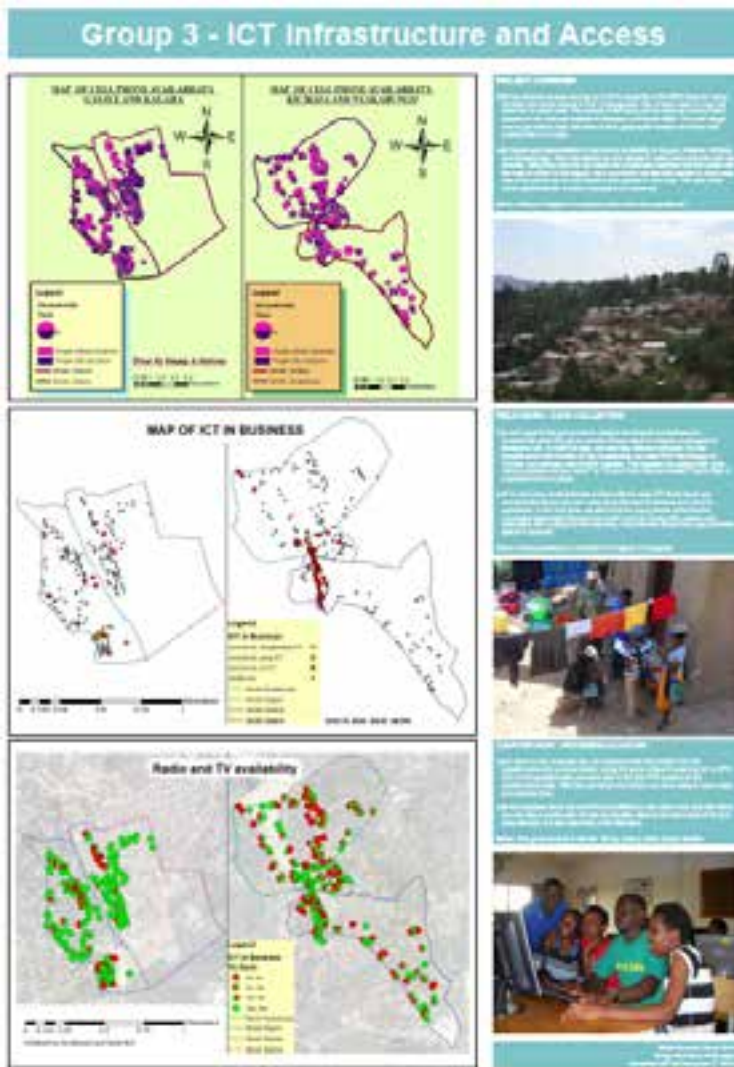
- + Conduct a «micro census»
- + Linking statistical data with geographic information
- + Partners: National Institute of Statistics of Rwanda (NISR), CGIS-NUR, RNRA



Esri Summer Camp 2010: The results in maps and posters



Esri Summer Camp 2010: The results in maps and posters



The Esri Summer Camps at a glance

The fourth Esri Summer Camp 2011:

An online Tourist Map of the City of Kigali

- + Collection of tourist information in Kigali (~1'000 Points of interest)
- + Partners: Rwanda Development Board (RDB), CGIS-NUR



The result - online

The screenshot displays the ArcGIS online interface for the 'Kigali Tourist Map - Esri Summer Camp 2011'. The browser address bar shows the URL: <http://www.arcgis.com/home/webmap/view.html?webmap=3a3a069966d54f9588661a>. The page title is 'Kigali Tourist Map - Esri Summer Camp 2011'. The map shows a street view of Kigali with numerous red and yellow markers. A popup window is open over a red marker, displaying the following information:

Category	International Administration
Subcategory	Embassy
Name English	BURUNDI'S EMBASSY
Name Kinyarwanda	
www	
Comment	CHANCELLERIE

At the bottom of the popup, there are two buttons: 'Zoomen auf' and 'Bearbeiten'. The map data is attributed to OpenStreetMap contributors, CC-BY-SA. The zoom level is set to 125%.

The Esri Summer Camps at a glance

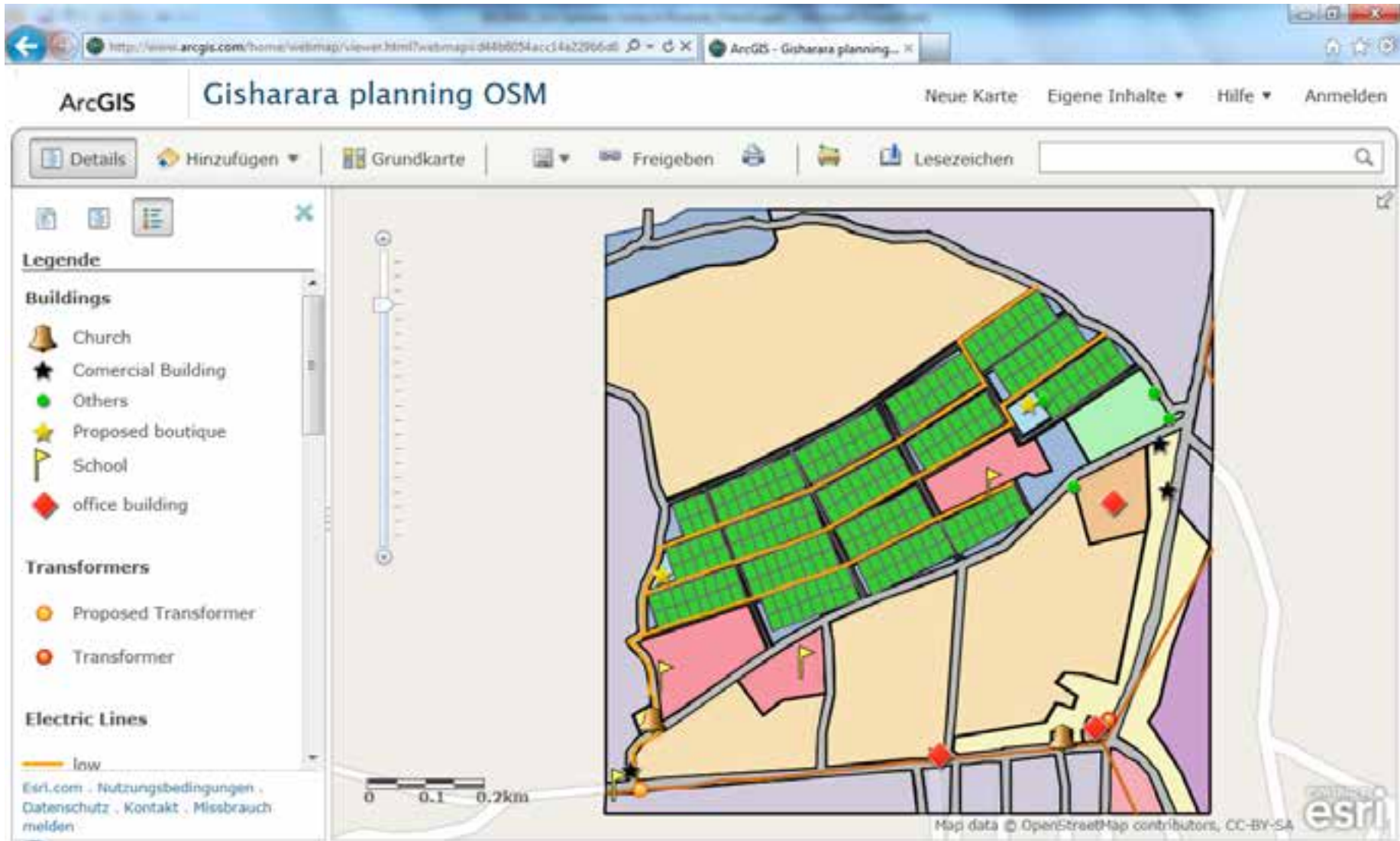
The fifth Esri Summer Camp 2012:

Planning of two rural villages supported by GIS

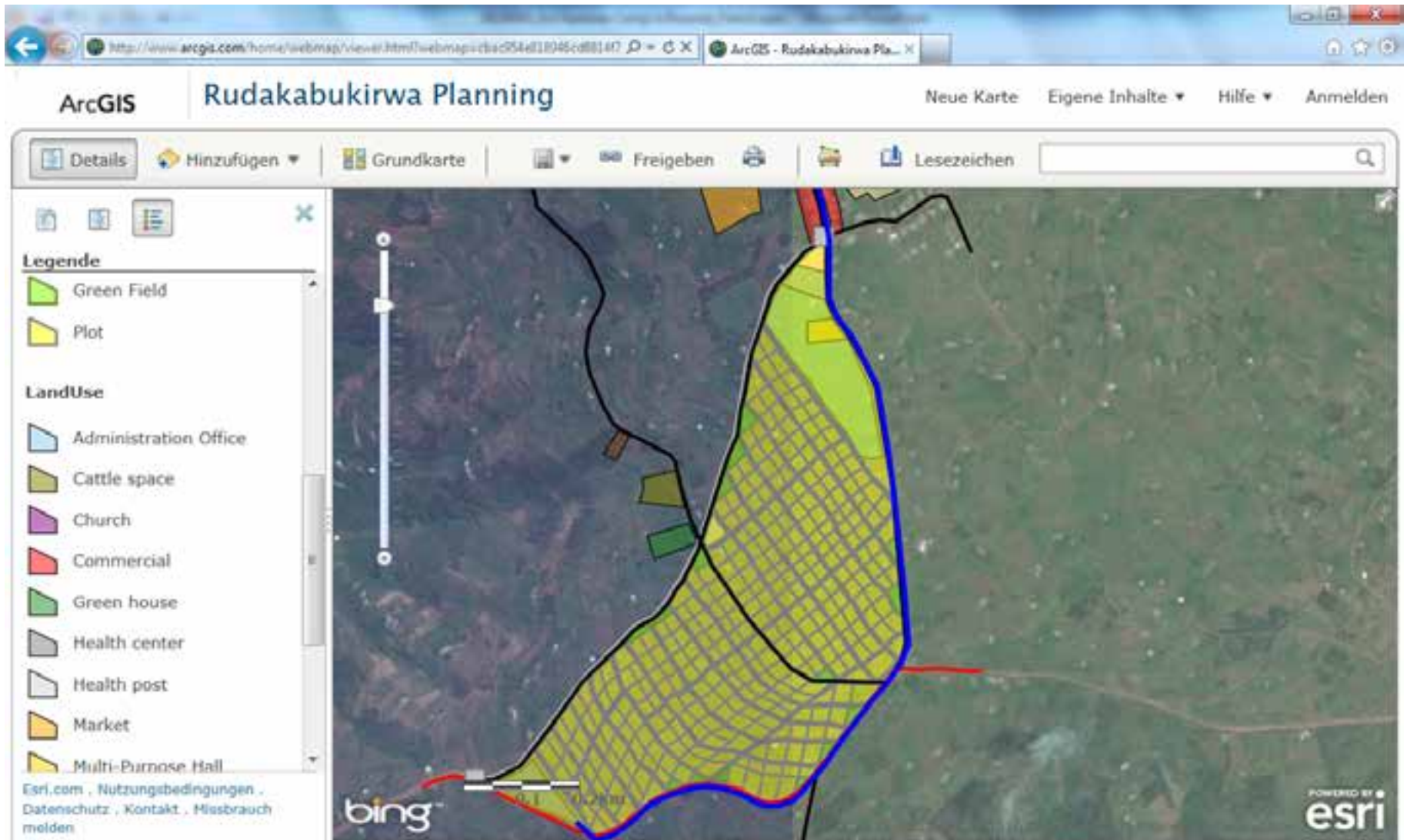
- + Data Collection of houses and existing roads, land use today, planned roads
- + Interviews with Sector authorities and local population about their visions
- + Draft plans and proposals for two villages
- + Partners: Ministry of Local Government (MINALOC), CGIS-NUR, RNRA



The results – online



The results – online



Putting the results of the Esri Summer Camp 2012 into practise



Unveiling the poster of the new village and



building the new roads for «Rudakabukirwa», Gasabo District

First Esri Summer Camp with the «Université Evangélique en Afrique», Bukavu, Democratic Republic of Congo

Establishment of a Health Database for the City of Bukavu

- + Introduce pupils of secondary schools in Bukavu to Geographic Information Systems
- + Collect health data using a GPS and a questionnaire to establish a preliminary health database for the City of Bukavu
- + Analyse the current health situation: facilities and accessibility
- + Partner: Governor & Ministry of Health, South Kivu, Brot für die Welt



Coming up in December 2013 – The next Esri Summer Camp in Rwanda

The sixth Esri Summer Camp 2013:

Improving Customer Services for Power Supply in Kigali

- + The participants of the Esri Summer Camp 2013 will capture relevant electricity facility data
- + Analyse how problems in an electricity network can be solved faster and how power supply to the customers can be improved
- + Partner: EWSA (Electricity, Water and Sanitation Authority), JICA, CGIS-NUR

