From camp mapping to transitional settlement management leading to viable communities

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In 2008 CartONG is supported by the UNHCR

Background: Where are we now?

- Various established methodologies and their guidelines (CMTK, Shelter centre guides)

- Initiatives focusing on GIS: block approach camp mapping (ICRC); various camp mapping guidelines with MapInfo (UNHCR), Step by Step with MapInfo (UNHCR, CartONG); GIS Tutorial for Humanitarian assistance (CartONG for ESRI Press)
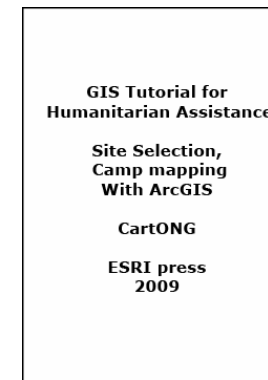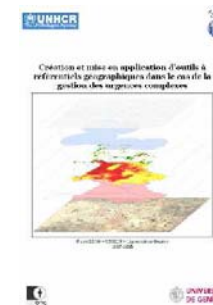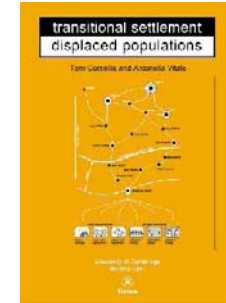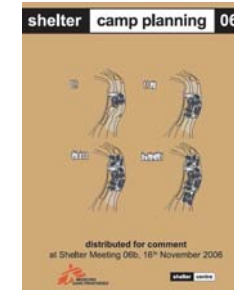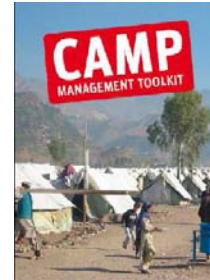
However

Guideline for a generic GIS component, regardless of software availability (proprietary or open) matching all types of settlements is needed!

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Existing: Generic GIS data models for refugee camps

Issue: Different models used within the different field operations of the same organization making data consolidation cumbersome

Solution:

- One common data model per thematic (possible to incorporate all changes during the life cycle of a camp) developed during the creation of the UNHCR WebGIS application
  - BECAUSE without regular update: there is no management of the site
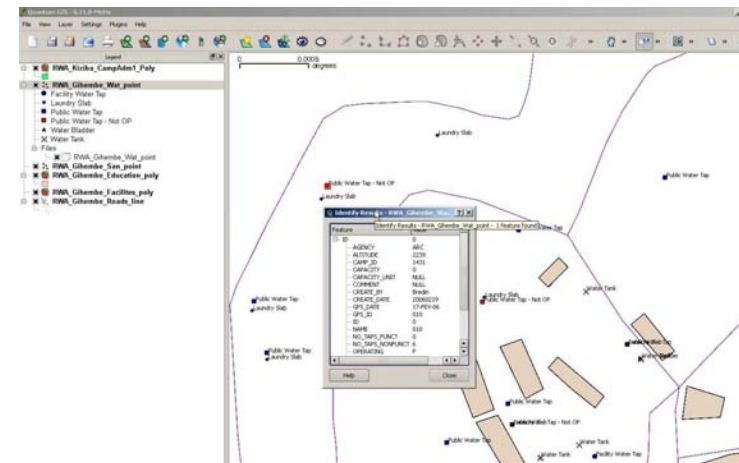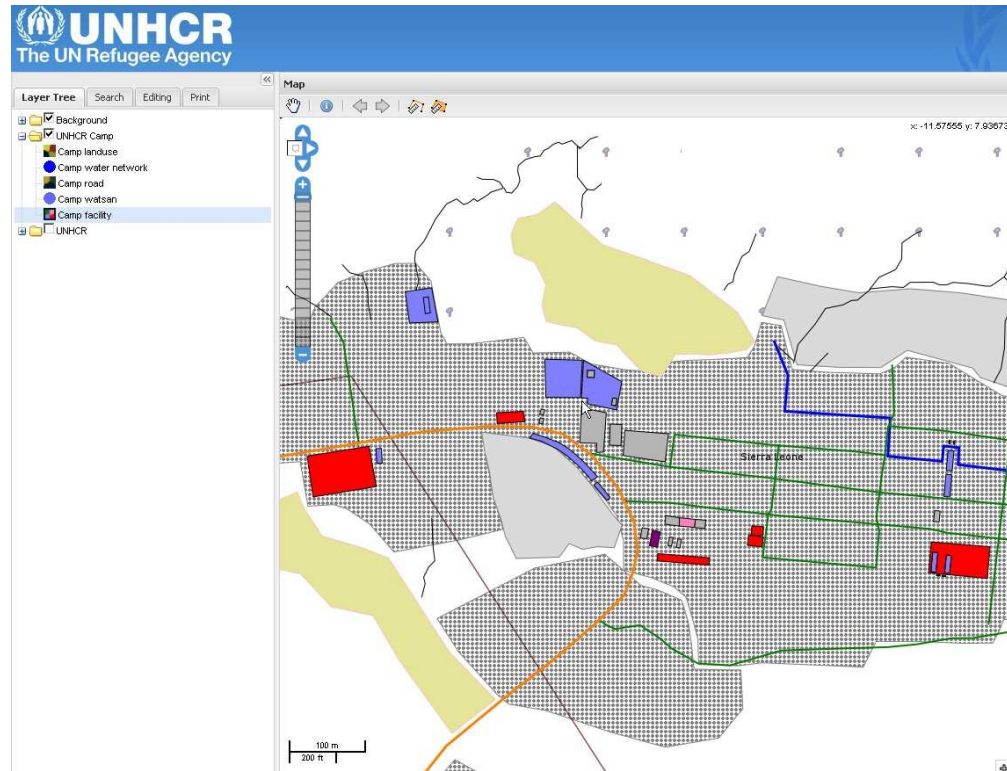

•Should we continue to work with Sketch map?　　•Should we continue with simple mapping application?

The UNHCR WebGIS a standard way to gather data and manage a site ?

- Participatory approach: each specific layer could be updated by the specialist of the sector.

- One common Database.

- Offline mode possible!

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Other existing data models for different contexts: replication possible?

One tool for the site management?

- IMSMA tool: one common reference for the deminers, same schemas, common symbols…

- UNSDI-T model. The logcluster is using for the transport a common database for the logisticians.

- Oasis/Ushahidi (security incident management)

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Planned: A tool build with a modular approach

Nothing new! Requirements for such an application were drafted in 2005 for UNHCR and NRC and some of you participated!

Requirements Analysis /Specifications
for the Application of the Camp Management
Information System (CMIS)

CMIS
Camp Management Information System

Requirements still the same, however, some new initiatives since then need to be taken into account:

•Linking with existing project (Sahana) and existing data sources (ProGres for the UNHCR location)

CMIS contacts

UNHCR:
PDGS Population and
Geographic Data Section
Karl Steinacker
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ETHZ:
Thomas Schuerpf
Email: schuerpf@sipo.gess.ethz.ch
Tel: +41 01 632 66 30

NRC:
Nina Birkeland
Email: nina.birkeland@nrc.no

- Based on existing libraries, on open source application.
  - Tool should be simple to use for non GIS specialist.
  - Ex for site planning: existing library the pre-designed shapes that could be dragged and dropped (like IKEA kitchen planner), simple SQL query tool (like Oasis). See next slides.
  - This transitional settlement tool management should incorporate forms used by the different clusters, organisations.

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Previsioned functionalities: Camp Design & Management

- Standardized datasets to maintain
  - Infrastructure
  - Sectors, blocks, plots
- Standardised functionality, easy to use
  - Add/remove infrastructure, add/remove plots
  - Camp overview maps that show data by plot/sector
- Suggested Tool: Custom Application
  - **No license costs for end user NEW**
  - View / print pre-designed maps
  - Simple GPS coordinates insertion & validation
  - Easy Data editing (attributes & shapes)
  - More advanced analysis / validation
  - **Export to WebGIS/Google Earth NEW**

Community Cluster - approx. 16 shelters.

Neighbourhood - approx. 10 Community Clusters

Township - 40 clusters

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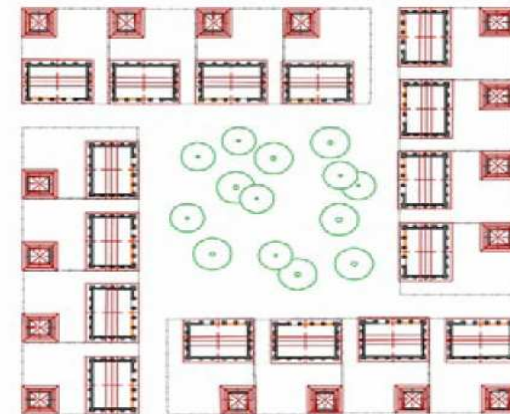
NEW: Additional Requirements: Existing Spreadsheets/databases ideally to be integrated into the GIS model

Issue:

- A BIG effort from CCCM for collecting standardized information at the camp level… but only once the site is created and without establishing a link to existing planning guidelines/toolkits…
- Different assessment forms used and different ways to manage/store the information; making integration of different information sources a challenge

Order of Deployment	1	2	3	4	0
	Geographic & Snapshot Data	**Population Tracking Form**	**Multi-Sectoral Needs Assessment**	**Camp Capacity Mapping**	**Urgent Action Report**
Purpose	Initial assessment and basic information on how many displaced people are living in which places.	To gather population arrivals and departures as well as more detailed demographic data from locations where the initial assessment has already been completed.	To gather sector-specific needs assessment data.	To indicate which humanitarian actors are working within each sector in the camp.	To provide a formal method - through phone, email, data collection form or otherwise - to report acute life-saving needs that need immediate escalation so that deep field actors do not attempt to use other data collection forms for this purpose.
Context	For use in the first few days or weeks of emergency. The displaced population is still moving. Only partial services exist, most not yet established. Response unstable.	Population movement needs monitoring *throughout* the emergency. The frequency of data collection will depend on the operational capacity and the volume of population movement.	For use a month or two into the emergency. Service providers have deployed in the camps. Intra-camp and inter-camp coordination is in place. Camp Manager is in place in most cases.	Should be used when humanitarian actors have been deployed to the camps.	Escalation Channel data collection can happen at any point during an emergency, but may be particularly useful during sudden onset.
Contents	Geographic location Physical characteristics of the site Initial population estimates Quick problem identification table	Population figures Demographic characteristics	Detailed sectoral needs assessment data that can be collected by a non-specialist. This data does not change as frequently as population data.	A table of who is doing what in each camp.	Formal notification of life-saving interventions required Examples include: Camp at risk of attack Camp residents starving
Scope & Restrictions	Data collected must be relevant at a regional headquarters and national level. Form must be extremely short and easy to collect.	This form is population focused and does not contain sector-specific needs assessment data.	This form contains data that will help prioritize interventions at the camp level.	Will not specify precise projects, only sectors and general sub-sectoral areas.	Can be used anytime for acute emergency.
Frequency	Once at onset of emergency and whenever a new location arises; updates only as needed	Frequent. Daily, weekly or monthly depending on the situation. Decision to be made at national level.	Infrequent. Every 3 - 6 months.	Ad hoc as needed, depending on how frequently humanitarian actors in a camp change.	Ad hoc as needed.

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rted by the UNHCR

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Focus on Camp Design

- Design camp setup including location of services and infrastructure

- Automatic verification if standards for services and infrastructure in a camp setting are met

- Generate camp plans including addresses

- Generate list of required building material depending upon selected building style

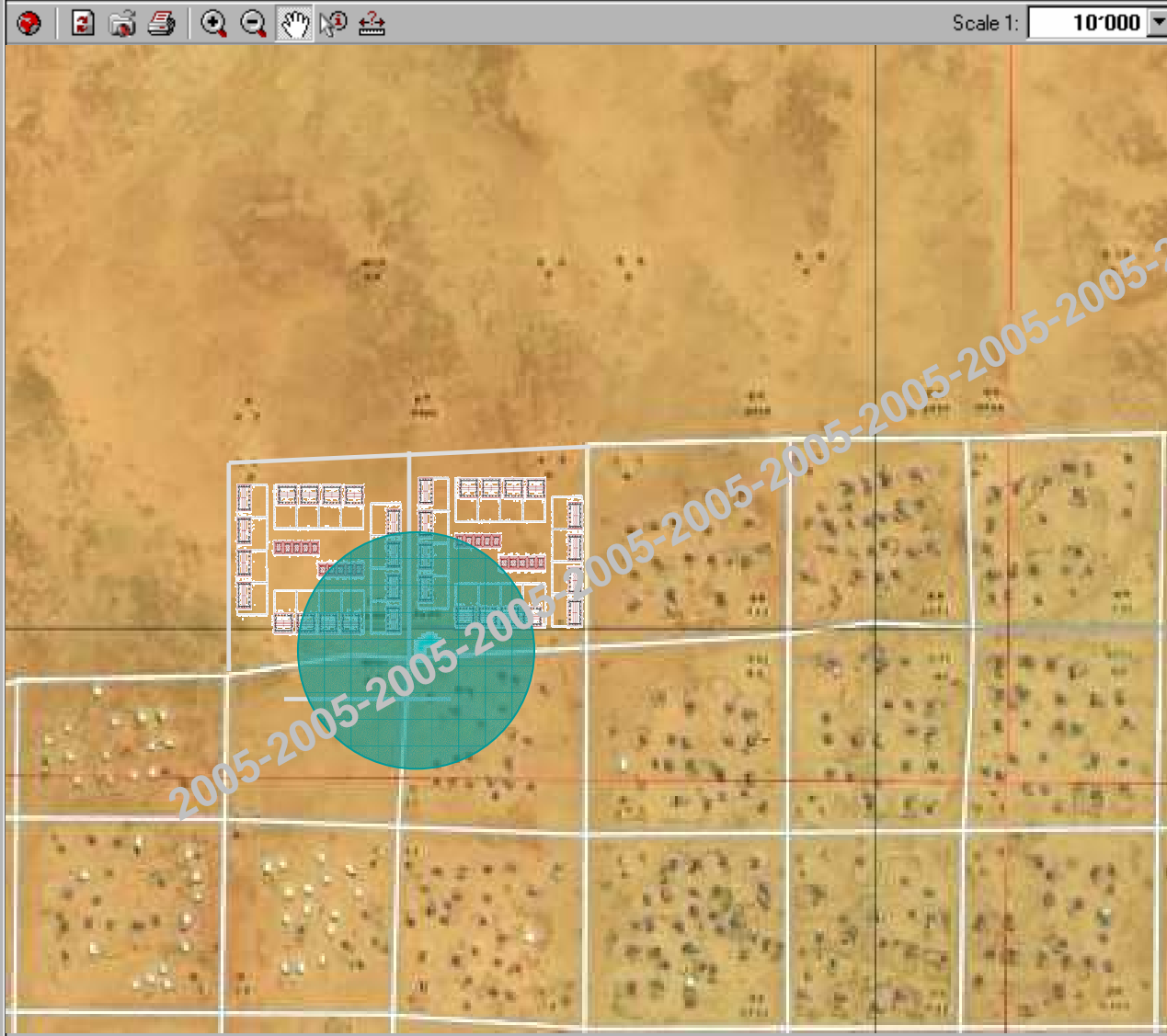- Update camp maps after construction according to the built infrastructure

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Mockup: Design Idea

CMIS - Camp Management Information System

File   Edit   View   Window   Help

100%

Scale 1:   10'000

Planning Elements

Food
Water
Water(non agricultural)
Sanitation

File   Edit   View   Window   Help

100%

Scale 1:   10'000

Planning Elements

Food
Water
Water (non agricultural)
Sanitation

2005-2005-2005-2005-2005-2005-2005-2005-2005

Initial proposal in 2005 on camps only. Integration of all settlement types possible?

YES, BECAUSE

- The main component is a spatial component for cadastre/plot management

  utilized for camp, conversion of a camp into a "viable community", settlements, urban context

Additionally:

- it could be extended and include the host community.

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Plan of action: using the GIS core component to manage the transitional settlement 1../2

Short term/ mid term:

- Adapting /extending the UNHCR Camp data model to other settlements categories.

- Develop the guidelines et step by step for open source desktop mapping application (layers with the existing schema, symbols,). For ex: On QGIS

- Series of GIS training for the camp managers

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Plan of action: using the GIS core component to manage the transitional settlement 2../2

- Using cartography all along the life cycle, for site selection and site planning to camp closure/site rehabilitation.

- Missing yet in the new version of the NRC CMTK: no tool to store and analyse your information collected through assessments as there is no e-soft version.

TOOLS

❗ Almost all the tools, publications and other documents referred to are available on the Toolkit CD attached to every hardcopy binder. Weblinks are provided for downloadable online resources.

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Challenges

- Even for already "well known" structure: Integration of data sources will remain the main challenge

- It will take more time for integrating the urban environment into it. Urban context it is still a lab!

- Bringing the open source community on that project

- To start modules by modules but keeping in mind incorporation or interoperability of the other modules.

Contacts/References

- Contacts :
- UNHCR : Luc St Pierre
- CartONG.

- References /Material

  -Requirements analysis specification for a camp management system (PDF)

  - Camp Management Toolkit: Multiplying the benefits of the toolkit by developing a Camp Management Information System (PPT)

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