

UIS INFORMATICS COMMISSION 2013-2017

Cave and karst documentation, mapping and data

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This report covers our work in the four years since the 2013 Congress in Brno, Czech Republic, together with results from the recent 2017 Congress in Sydney, Australia. Please note that although the term "working group" has been used during the four years of this report, the UIS Bureau has decided to discontinue this term, and so the Commission and its sub-groups will need to decide on a new terminology for the future.

Our groups have made good progress as below, but other projects are waiting for volunteers to help. If you would like to contribute to the progress of cave and karst documentation techniques, particularly that related to data fields, data exchange and the semantic web, please contact the president at the email address above. And if you would like to contribute to any of the groups below you are very welcome - please email their leader directly. We are also still looking for a Vice-President to help run the Commission and its work, and we could really use some cave documentation oriented people who are adept at developing web-based applications.

An old but important issue which has arisen during the work of the UIS-WikiCaves Working Group is that of balancing the need for ready access to cave and karst information against the need to protect the caves and cave owner relations. One size does not fit all, and so some serious discussion is needed to reach a consensus and strategy to accommodate the requirements of each country.

SURVEY AND MAPPING

Leader: Philipp Häuselmann (Switzerland) - praezis@speleo.ch

Web: <http://www.uisic.uis-speleo.org/wgsurmap.html>

The Survey and Mapping Working Group focussed on two new topics during the period - Symbols for artificial cavities, and T-LiDAR cave scanning. See also 'Survey Archive' further below.

MAPPING SYMBOLS FOR ARTIFICIAL CAVITIES

Leader: Philipp Häuselmann (Switzerland) - praezis@speleo.ch

Web: <http://www.uisic.uis-speleo.org/wgsurmap.html#artificial>

At the request of the UIS Artificial Cavities Commission in 2013 and after discussion at the International Congress of Speleology in Artificial Cavities, HYPOGEA, in March 2015 in Rome, a draft symbol set was prepared and sent to the Artificial Cavities Commission for their consideration. Their responses were considered by the working group at the Sydney Congress and a final set for voting will be issued later in 2017-2018.

T-LIDAR CAVE SCANNING

Leader: Donald McFarlane (USA) - DMcFarlane@kecksci.claremont.edu

Web: <http://www.uisic.uis-speleo.org/wgsurmap-lidar.html>

This survey working group was formed in 2015 to establish recommended guidelines and standards for LiDAR (Light Detection and Ranging) laser scanning and mapping of cave chambers and passages. An initial meeting was held in Belgium in 2015 where provisional agreement was reached on open standards for file formats. Many examples of LiDAR scanning were displayed by a range of people at the Sydney Congress. Further discussion was held at the Congress by the group and the details will be available shortly on their web page.

PUBLICATIONS EXCHANGE

Leader: Trevor Faulkner (UK) - trevor@marblecaves.org.uk

Web: <http://www.uisic.uis-speleo.org/publexch>

At its initial meeting at the Brno Congress in 2013, this working group was established to assist with the exchange, accessing and archiving of speleological publications into the future. Further meetings were held in the UK in 2016 and in Australia at the recent Congress. At these meetings and from email exchanges two editions of a series of draft guidelines were established and updated, together with spreadsheets to record the current publications and their exchange status. At the Sydney Congress Edition 3 was reviewed and will be finalised for distribution and publication on the group's web page later this year.

After the final release of the guidelines and status, Trevor will be resigning as Leader of the group, and Michele Sivelli of the Centro Italiano di Documentazione Speleologica Biblioteca "F. Anelli" (Società Speleologica Italiana) will be taking over the leadership for the ongoing maintenance of the Guidelines and the periodic updating of the exchange status documents (contacts, publications and exchanges).

Please see the web page for more information, and Trevor's detailed progress reports can be found in UIS Bulletins.

UIS-WIKICAVES

Leader: Didier Borg (France) - dcborg@aol.com

Web: <http://www.uisic.uis-speleo.org/wikicaves>

The UIS-WikiCaves Working Group was set up at the Brno Congress in 2013 to foster liaison between WikiCaves and UIS and to encourage the use of GrottoCenter's existing web database (established in 2008) to improve open and standards-based access to basic cave and karst data on a global basis, while accommodating the various protocols needed by each country for the protection of their caves and landowner relations.

Accordingly, the working group sent out a letter in April 2016 under the signature of the UIS Secretary General and the WikiCaves President to all national organisations and delegates to ascertain what level of locational precision for caves their country can accept on the GrottoCenter cave data website, and whether they would help the project by supplying information about their caves. Some countries have indicated their interest in cooperating, or have even signed a partnership agreement, others have indicated difficulties with sharing information, but a large number of federations have not yet responded. We encourage the remaining countries to respond, otherwise we have to assume that there is no restriction on the location precision presented for any data which could be supplied by anyone in the world for caves in their country.

There is still a lot of concern about cave protection, which is good news, but the question remains: In the 21st century, how can we enable easy access to information for exploration, research and management while still protecting the caves? This will be a topic for discussion in the coming period.

Meanwhile Version 3 of the GrottoCenter website is now in Beta, and includes mechanisms for specifying restrictions and managing graded access to the cave data.

CAVER'S MULTI-LINGUAL DICTIONARY

Leader: Mladen Garašič (Croatia) - mgarasic@grad.hr

Web: <http://www.uisic.uis-speleo.org/lexintro.html>

First displayed on the web in 1998 with over 300 speleo concepts in four languages, the Dictionary over the last four-year period has seen the addition of Polish, Ukrainian, Russian, Turkish and Arabic in that order, thanks to our hard-working contributors, taking us now to 26 languages and with more in the pipeline.

New languages or improvements to existing languages are always welcome. Important technical information on how to supply a new language is available on the Working Group's web pages. We have also had an offer to add Italian dialect terms and to add artificial cavity terms.

Although already comprehensive in terms of languages, the Dictionary certainly has scope for further development. For example, more flexibility in its presentation, links to actual definitions in the various languages, and conversion of its offline database to a web database. We welcome anyone who is interested in helping with these developments, or who can provide information about access to actual definitions in any of our languages.

FROM THE SYDNEY CONGRESS

Apart from the further developments in our groups as mentioned above, the following new issues arose during the Sydney Congress:

Data transfer

The Fort Stanton Cave Study Project (New Mexico, USA) needs to transfer their significant data holdings to the managing agencies, and enquired about the existence of cave photo data standards. As well as data for over 50,000 photos, their holdings include the usual survey, inventory and scientific measurement data. In subsequent discussions it was agreed that the project and the Commission's existing Data Exchange Working Group would collaborate to assist with this transfer, and in the process continue the current development of UIS' cave data transfer and archiving standards. We would also be interested to hear from anyone who has already established a cave photo catalogue.

Survey archive

The Commission was approached by a caver who was holding over 40 years of survey data for a major cave system and was enquiring about the possibility of archiving this data for open access in a secure location over the long term, in particular, after he had passed on. This idea certainly has merit, however there are many questions to be answered, decisions to be made, and online development to be done before such an archive could be set up effectively. Preliminary enquiries have been made about possible international sites. The Commission will create a new group to look into the issues, and so our Survey and Mapping Working Group is considering whether to make this their next project.

Mailing lists

Several emailing lists are being set up via the UIS Internet Facilities to assist with the discussions on the various topics mentioned in this report. Details will be available via our website in due course. Everyone is encouraged to join and contribute to any of the groups and discussions above which interest them. More details about each group can be found on their web page.

Commission leadership

No volunteers came forward to take over leadership of the Commission, so Peter Matthews will continue as President. A Vice-president is still being sought.