

Colorado Cave Survey  
Cave Information System Committee  
January 23, 2008 meeting

Summary of meeting:

The committee met for the first time to discuss the creation of a Cave Information System. The purpose of the committee is to come up with ideas for what the purposes of such a system would be, and how it would work. Those ideas are to be shared with the Colorado Cave Survey (CCS), and interested persons from the organized caving community. Feedback and additional ideas are to be solicited from the community. The task is important and complex, and will not happen overnight.

It was discussed that the process should happen in stages, with the committee submitting a written report (like this one) at each CCS meeting, and that report being made available to interested cavers. The caving community can review that document at their leisure, and supply feedback to the committee. Feedback from the caving community will then be used to improve the overall plan at the next meeting of the committee. This method should eventually produce a plan for a system that will be supported by, and useful to, the organized caving community in Colorado.

Marty Morey provided the following outline to guide discussion during the meeting:

**The Need:** Develop a Cave Information System. This includes the appropriate storage of cave related information and a process to distribute information as authorized to do so.

**Proposed Process to address this need:**

- 1 - Verify the above stated need is accurate.
- 2 - Determine the user requirements of the system. These requirements should include entering, extracting, and storing of the information.
- 3 - Establish sensitivity and risk levels for information.
- 4 - Design a model of how the flow will work. This should include the process of how information will be entered how and released. A description of the storage and security controls should also be provided. This information should be presented to the CCS for review.
- 5 - Determine the appropriate technology to implement the system, security controls, and contingency plans (back-ups).
- 6 - Create the system.

It was quickly established that the committee thought that there was a need to securely store and organize cave related information, and create a process to distribute that information with appropriate authority. The current focus is on cave location and vital statistic data (e.g. length, altitude, geologic setting). Technical (computer) aspects of such a system are not being worked on yet. Rather the committee discussed the broad concept of a cave information system. A first attempt was made at a purpose statement:

#### **Purpose of the CCS Database**

The Colorado Cave Survey database is designed to be a comprehensive, centralized repository of cave and karst data which will be actively supported and maintained for the foreseeable future. The database is intended to promote preservation of cave and karst resources and to encourage science, exploration, and recreation. Support for the database will be encouraged by ensuring protection for sensitive information while providing reasonable access to non-sensitive data.

Two more specific aspects of the cave information system were discussed. First was a system to classify the sensitivity of cave location data, and simplify rules or decision-making for data release. In one-on-one conversations with interested cavers, this has been a common topic of concern. The committee came up with a two-part system for classifying cave location data.

#### **Risk to cave (1-5):**

- 1 Commercialized caves, shelter-type caves, caves with no features to damage, caves already heavily vandalized  
Examples: Fault Cave, Cave of the Winds
- 2 Heavily used caves that could still be damaged, locations available on commercial maps  
Examples: Fulford Cave, Hubbard's Cave
- 3 Caves susceptible to damage, but low risk (e.g. formations high on ceiling)  
Examples: Huccacove, Spanish Cave
- 4 Caves with delicate features, easily damaged. Sensitive biota?  
Examples: Breezeway Cave, Groaning Cave
- 5 Extreme risk. Delicate, non-obvious features. Extremely sensitive biota?  
Examples: Incompletely cataloged archeological sites, bat maternity colonies.

#### **Risk to human being (1-5):**

- 1 Commercial caves, shelter caves without difficult approaches
- 2 Beginner-type caves. Basic caving skills required.  
Examples: Huccacove Cave, Fulford Cave
- 3 Intermediate caves

- Examples: Groaning Cave
- 4 Technical vertical ropework, extreme constrictions, or advanced climbing skills required.  
Examples: Fixin' to Die Cave
  - 5 As for level 4, but with additional mitigating factor(s) (e.g. remote location, water, cold, difficult route finding)  
Examples: Spanish Cave, Hurricane Cave

We considered how these ratings would be set. One idea was to have the person reporting the cave work out its ratings with the database manager. If the two could not come to an agreement, the matter could be voted upon by the CCS.

The second aspect of the cave information system that we considered was management. The person(s) managing the system will have great responsibility, they will have to be trustworthy and committed to the task. We considered that having two managers, a primary and a secondary, would be a good structure because it provides redundancy. Those managers might be nominated by the CCS Chair, and approved by the members. There would be no specific term of office, but to minimize turnover, managers should be willing to serve at least five years.

That was the extent of discussions at the meeting. We are taking the first steps of a long journey. Cavers interested in commenting on this report and the planning for the cave information system are encouraged to get in touch with the members of the committee. We thought it would be appropriate for cavers to know who is on the committee and what backgrounds they bring to the project. That information is below.

#### Committee members, and relevant biographical information:

Carl Bern (NSS 40782): Email: [cbern5@juno.com](mailto:cbern5@juno.com)

Carl Bern has been caving for 16 years with grottos in Virginia, Oregon, and (since 1999) Colorado. He is an active explorer and surveyor in Colorado and the Rocky Mtn. region, particularly in Wind Cave, SD. He has served in numerous elected positions in the organized caving community including Chairman of the CCS, as Director of the Williams Canyon Project, and is current President of the Front Range Grotto. Currently employed as research scientist in the field of ecosystem chemistry.

Stuart Marlatt (NSS 19583) Email: [Stuart\\_Marlatt@comcast.net](mailto:Stuart_Marlatt@comcast.net)

Stuart Marlatt has been actively caving in Colorado for over thirty years. He has been involved with the Colorado Cave Survey over twenty years, serving several terms as Chair. He has been associated with the Colorado Grotto since 1981, serving as Chair, Vice-Chair, and CCS Representative at various times. He has also been an active member and instructor for the Colorado Cave Rescue Network since 1982. He holds a PhD in Aerospace Engineering, and is presently

involved in aerophysics research as a Technical Fellow for the United Launch Alliance

Marty Morey (NSS 53414) Email: [skiandcave@gmail.com](mailto:skiandcave@gmail.com)

Marty Morey has been caving for 15 years, the last five in affiliation with the Southern Colorado Mountain Grotto. Current contributions to the caving community include organizing rescue seminars for the Colorado Cave Rescue Network and co-chair of the upcoming NSS 2011 convention. She served as chair of the Southern Colorado Mountain grotto in 2007. She has a B.S. in Mathematics and is pursuing a Master's of Science degree in Information Systems. Professional experience includes over 11 years in the information technology industry with concentration in application development and information security. She currently manages the Information Security department for a financial institution.

| Steve Reames (NSS 25533) Email: [spreames@diskdrive.com](mailto:spreames@diskdrive.com)

Steve has been an active Colorado caver in the CG and SCMG grottos. He has a degree in Electrical Engineering and Computer Science. He is interested in Linux, databases, and dabbles with COMPASS software.

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Donna Rene (NSS #####) Email: [cavefish@fastmail.fm](mailto:cavefish@fastmail.fm)

Donna is currently caving in Central America and could not attend the meeting or supply a bio. She has formal training in library sciences.