

Zoological Information Management System - ZIMS -- till date

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The new Zoological Information will bring the art of global cooperation, which zoos do so well, and the science of zoological information management together for maximum help to zoos in saving threatened species, conducting conservation research and even educating the public.

ISIS has been around since 1974 working to provide the most current, comprehensive, reliable source of information on animals and their environments in zoos, aquariums, and related organisations.

After 31 years of annual member growth, now there are 630 member institutions in more than 70 countries, all using ISIS' products to a greater or lesser degree. This includes ISIS Software, ARKS (Animal Record Keeping System for each individual animal), SPARKS (for managing studbooks for better genetic and demographic management); MedARKS for medical records, EGGs for hatching data.

ISIS has long been concerned about the non-member zoos in the world, as it is useful to the global zoo community if all zoos are members, and also about those which use its products "to a lesser degree". The new ZIMS -- Zoological Information Management System -- can address these concerns.

Instead of having several different programmes, ARKS, MedARKS, SPARKS, EGGs, etc., all of these will be replaced by the new ISIS software, that is ZIMS.

ZIMS Project :

One of the BIG differences between ZIMS and the other programme is that zoo personnel all over the world are themselves Designing ZIMS through workshops and web discussions. Every region is represented and will get an opportunity through meetings, list serves, etc. to tell us their needs and problems. Nearly 500 staff from almost 200 organizations are in the process of designing ZIMS. Here is what people say about ZIMS after these meetings :

"The ability to have your voices heard in the various use cases discussed at the JAD session was fantastic. I really feel some 'ownership' of ZIMS now." Sjoukje Vaartjes, Melbourne Zoo, Australia.

"I had the opportunity to have considerable input in the process and am looking forward to seeing the development continue...our comments are being listened to. This is the best opportunity to have ZIMS do what we want it to." Geoff Pye, Werribee Open Range Zoo, Australia.

"Thank you for inviting me to the ZIMS conference in Rotterdam. I have shared my knowledge what ever was possible during the conference but also developed good contacts with many zoos of the world, which is very important for the betterment of zoos and welfare of wildlife. R.K.Sahu, President, South Asian Zoo Association for Regional Cooperation.

"The IADISC Meeting in Melbourne, Australia, which concluded with the ZIMS Project introduction and regional updates was a great opportunity provided by ISIS/ZIMS. This will help the organizations like Central Zoo Authority, India

to join the advanced information system that will support a wide range of animal management and conservation activities world wide. ZIMS will definitely provide scientifically organised data to global users and this will assist us in all aspects of scientific management and ex-situ conservations goals. Brij Kishor Gupta, Scientist, CZA, India.

**ZIMS WILL BE ONE system
it will be a GLOBAL system
it will be an ACCURATE system
it will be a WEB-BASED system
it will be a REAL-TIME system
it will be the best ANIMAL INFORMATION system !**

ZIMS will provide appropriate access to key information on 2 million animals

ZIMS will provide staff access to best practice in husbandry, veterinary, etc.

ZIMS will provide Real-time, current to today information

ZIMS will provide much higher quality data

ISIS has outsourced its software development to a major company instead of its previous "three men in a basement" approach. The CGI software developers are the 4th largest North American Systems Integrator with 25,000 professional programmers and developers with Fortune 500 companies, banks, and governments as customers.

So, what have our 500 volunteers and CGI come up with?

HERE IS A SNEAK PEEK ----> see next pages

ZIMS will allow **vets** to:

1. Quickly learn how to best treat animals based on the pooled global veterinary experience base.
2. Be aware of disease incidence rates and outbreaks ...to better protect your collection & our managed populations

ZIMS will allow **registrars** to:

1. "one-click" acquisition (from 630 other ISIS members)
2. Record data just once (for institutional and studbook use)
3. Record groups properly

ZIMS will allow **aquarium staff** to:

1. Access centralized vet, collection management & water quality info.
2. Record group transfers, including splits & merges
3. Manage environments, including water quality & filtration

Many institutions have had so much confidence in the need for ZIMS and the potential for ZIMS that . . .

More than US \$4.3 million in commitments from 146 zoological institutions worldwide as well as a

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\$500,000 IMLS Grant
 \$300,000 NSF Grant
 \$500,000 U.S. Congress Appropriation
 \$100,000 Boeing
 \$5.5 Million in commitments raised (\$10 million Campaign)

We are now one year into a two year ZIMS construction contract with this.

So many important people and organisations can't be wrong. We hope you will try to learn more about ZIMS and join with Central Zoo Authority and the South Asian Zoo Association for Regional Cooperation in their efforts to get South Asia on board this swiftly moving train to easier, more accurate and more useful zoo records. ZIMS will succeed in linking the global zoo community in ways that previous efforts have been unable to do.

This system will just go on growing as more and more zoos contribute. With ZIMS, one day it will be possible for a zoo veterinarian in Afghanistan to find a mate for his black bear in India, or a cure for its rum tummy from a vet in Birmingham, Alabama, and to record births of cubs which are genetically distant from bears in Nepal Zoo and Dhaka Zoo and therefore perfect choices for the regional breeding programme. This is a dream today but the way the world and technology can work for zoos and threatened species tomorrow.

Because of inputs from people from so many parts of the world, people in all parts of the world will find ZIMS a very useful tool for doing their jobs much better.

Have a look at these very preliminary screens and contact www.isis.org or isis@isis.org for more information.

South Asia represented at IADISC meeting, Melbourne, Australia

The IADISC meeting was held on Friday-Saturday, April 29-30, 2005 at the Melbourne Zoo. Brij Kishor Gupta, Scientist, Central Zoo Authority attended representing CZA and SAZARC. Sally Walker attended as a representative of SAZARC. The IADISC committee attempts to give oversight to ZIMS and insure attempts to improve data quality and other technical issues are given due importance. Dr. Sue Dubois chairs the group and Dr. Kevin Johnson is Co-chair. Although a large number of people were listed for the meeting, over a dozen could make the long trip to Australia. PAAZAB - David Morgan, IADISC Chair – Sue DuBois, EAZA – Frands Carlsen, Duncan Bolton, Bart Hiddinga, ARAZPA – Kevin Johnson, John Inkson, SAZARC – Sally Walker, SAZARC, CZA -- Brij Kishor Gupta, Hans Keller, AZA Baltimore Aquarium; Robert Erhardt AZA Baltimore Aquarium; Nate Fleisness, Director of ISIS/ZIMS, Syed Hassan, Programme Coordinator, ISIS/ZIMS IADISC itself is an acronym meaning International Animal Data Information Systems Committee and the committee is dominated by other acronyms. Those of us attending for the first time, such as Dave Morgan, Brij Gupta and I felt we were in touch with a new race of people with their own language and symbols. For example, there are the "smees" ... that is how it is pronounced but this actually stands for SME, a "subject matter expert". We learned at least what SME meant even if we were never quite sure we learned all the things IADISC is responsible for. Our role was more in contributing information related to the implementation, distribution and training related to ZIMS.

Dave Morgan gave an excellent review of the situation in the African Zoo Association (still acronymned as PAAZAB).

ZIMS INTERFACE

The screenshot displays the ZIMS web interface. At the top, there is a navigation bar with links for 'Admin Console', 'Help', 'Preferences', and 'Logout'. Below this is a 'CURRENT CONTEXT' section showing 'Home > Animal'. The main content area is titled 'Accession' and contains several form fields: 'Accession ID:' (091347), 'Accession Date:' (March 28, 2005), 'Collection Name:', 'Accession By:', and 'Group Count:'. There are also checkboxes for 'Also Fill In:' with options for 'Acquisition', 'Assign To Enclosure', and 'Assign To Identifiers'. A 'Submit' button and a 'Save and New' button are at the bottom. A yellow callout box points to the 'Animal' menu item in the left sidebar, stating 'Clicking the arrow will be expand the menu to its original state.' Another yellow callout box points to the 'Accession' menu item, stating 'The main menu is collapsed and the Actions menu is drawn all the way up with the current selected item highlighted (Animal in this case)'.

MORE ZIMS INTERFACE

Animal Search

Search criteria: Taxonomy, Identifier, Collection

Context menu not populated because no animal is selected.

Option to organize the search results by clicking the header items (Date, Accession etc..)

DATE	ACCESSION	TAXON	COMMON NAME	ACTION
3/1/2005 12:00:00 AM	091334	Capra hircus hircus bagot	Bagot goat	Accession
3/1/2005 12:00:00 AM	091335	Colobus angolensis edouardferdici	Black and white colobus	Accession
3/21/2005 12:00:00 AM	091321			Accession
4/18/2005 12:00:00 AM	091313	Baboussa babyrousa	Baboussa	Accession
4/18/2005 12:00:00 AM	091315			Accession
11/22/2004 12:00:00 AM	091292	Tragelaphus (Hyr)		Accession
11/9/2004 12:00:00 AM	091276			Accession
11/9/2004 12:00:00 AM	091276			Accession

Option to navigate through the search pages.

Actions menu not populated as no animal is selected.

Option to change the no. of search results. show 10 items on the page.

Accession

Selected item highlighted: Animal

Clicking the arrow will collapse the menu.

Buttons to perform the relevant tasks.

Action tabs. The actions for Animal item are categorized into 3 sub-menu items: Husbandry, Health, Management.

Sample Accession Page.

Accession ID: 091347

Accession Date: March 28 2005

Collection Name:

Accession By:

Common Name:

Taxonomic Name:

Type: Individual

Count Type: Actual

Also Fill In:

- Acquisition
- Assign To Enclosure
- Assign To Identifiers

Submit Cancel Save and New

Sally gave a verbal report on the SAZARC countries other than India relating a general idea about computer access, internet access and training needs. She also described the intention of SAZARC to make their training theme "data management" and feature ISIS/ZIMS on the first day or two and follow it by training in records and population management, studbooks, etc. Brij Kishor Gupta gave an excellent Power Point presentation on Central Zoo Authority and their achievements and issues related to ZIMS.

An excellent presentation on Regional Collection Planning for Invertebrates, Lower Vertebrates and....? written by a number of people was given by EAZA representative. (Anyone interested in this topic can contact Sally Walker at ZOO and she will pass your request to one of the authors who can permit us to send you a copy of the presentation.).

There was a ZIMS Project Timeline Review in which Sue and others discussed various problems relating to the pace and progress of ZIMS and the professional company developing it.

Robert Erherd of San Diego Zoo gave an excellent presentation on ISIS/ZIMS COEs -- Centres of Excellence which is an institution that will act as a model implementation of ZIMS. These institutions will become leaders in the adoption of new processes available in ZIMS. Centers of Excellence are in use in a number of industries, like manufacturing, pharmaceuticals, and academia, within and across institutions. They would also *confirm Business Process Re-engineering maps, "operationalizing" ZIMS at the institution level. *develop "straw model" test scripts, *develop training scripts, *develop comprehensive deployment work plans. *act as beta test sites, act as "tutors" or "mentors" for ZIMS implementation in their geographic area or for other peer institutions.

Syed reported for Asia on the Osaka workshop. He said that Eric Tsao has contacts in China as well as Taiwan and other South East Asian country. Susan Gendron and others have been contacted and a SEA IADISK will perhaps be organized. Syed also reported that JAZDA decided to drop their system and go fully for ZIMS. He said they had finished the "business" of case gathering of we do our work on a daily basis – going to systems use cases.

Duncan asked how ZIMS is planning to give assistance to the developing regions – Syed said that is a challenge and they want to make sure that the new system is not just for the rich countries of the world.

3 suggestions

- should have infrastructural support for these region – CGI will provide 200 computers but we need at least 500 computers
- need to provide internet connections because without that they can't communicate
- training – difficult and challenging, not just for these countries but for even European and other countries are challenging for this new programme. Working on training plan ...has to be some kind of partnership between regional associations and us ... some items would be to

have some institutions start and mentor others.

- Human resources : ZIMS is hoping local institutions will see importance and put in more staff ; otherwise we will have to get sponsors from institutions.
- Ducan commented that this meeting gave an idea of the problems of the developing regions and they are similar but not exactly alike and each region needs a different type of help and may be systems which may not have been used before.
- Sally asked if thinking outside the box included entrusting one zoo or organisation (such as CZA in India) in each country to do the work and yes the "CEO's" Centres for Excellence – would do this ... exactly what they are thinking
- San Diego representative said they had some old computers could be donated
- Sally commented donated computers are often problematical and that possibly companies in these countries with their base in developed regions could be convinced to come forward and supply computers meant for the country of use.

After tea break Sue Dubois went over the time line. She described the data standards conversion project. Rotterdam participants made the first cut and came up with some requirements but the Orlando workshop will work further on it. They will also be looking at databases from ARKS, MEDARKS, SPARKS

Institutions which have developed their own data base (such as CZA) will have to do their own conversion.

By June, July & August ZIMS needs the first template for the developers, CGI, (company writing the software) needs "business rules" for standards in order to making sure the template works.

SAC – Scientific Advisory Committee – John Ballou, Bob Lacy, etc. Someone should be nominatd from every region. This individual should be technically qualified. This was the end of standards discussion.

Security of data. ISIS board is going to tell institutions what part of their data they will have to share with others in the new system. Some zoos are more sensitive about this than others. By 18 May, the first screen of ZIMS will be ready to view and to print.

San Diego Zoo representative commented that he can do more because his institution is behind him; this is not the case with all institutions (this was said to be a dramatic understatement) — there are opportunities worldwide to address all directors in various regions and should take advantage of them ... mountain climbers syndrome ... look up and see how far there is to go ...have to look back and see how far you have come.

Brij Gupta had to leave after first day due to family illness. S. Walker attended the morning session of 2nd day and discussed training plans with the group and also some of the ways that regions such as South Asia have had and will have difficulty coming onto the new system. Solutions to these difficulties are available and better communication and jumping aboard on faith will be required to some extent. Brij Gupta (CZA, SAZARC) was invited to the ZIMS technical workshop in Orlando, Florida and his ability to participate is as yet not ascertained as this goes to press.