

Image Database Catalog

Vladimir Ivanov

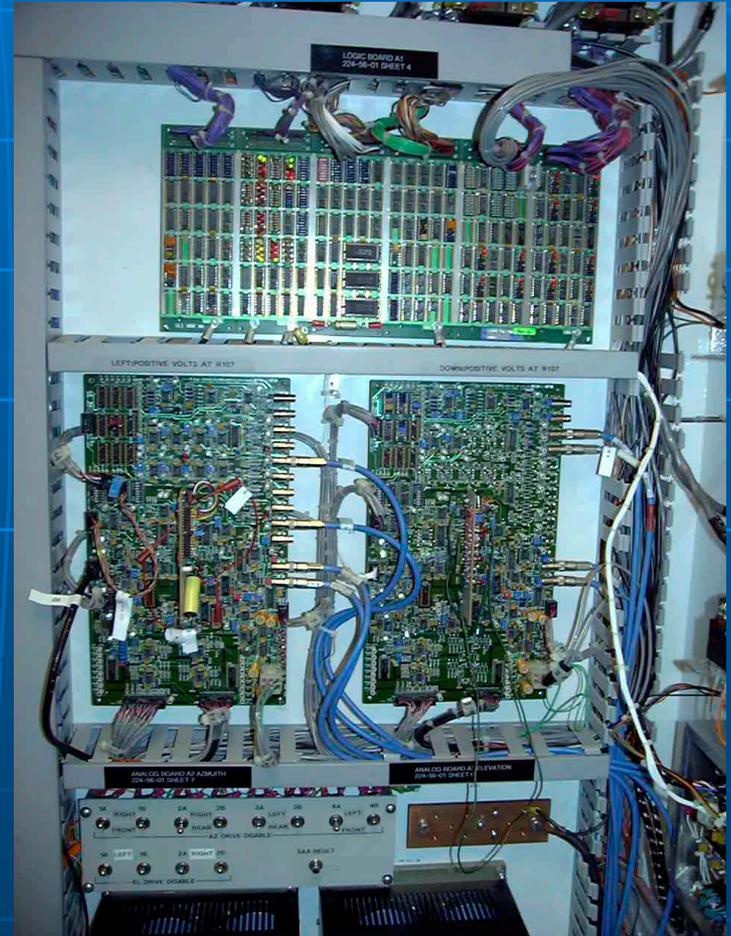
W.M. Keck Observatory

Project Supervisor: Peggi Kamisato

Project Advisor: Dr. Shui Kwok

Home Institution: University of Hawai'i at Hilo

Entertainment versus Information



Problems

- There is no substitute for visual information
- Thousands of unorganized images
- Not accessible to everyone

Database

- Organized
- Searchable
- Time efficient
- Easily accessible
- Sorted

	Description K1 Rear Cass Instrument Panels Date of image Full Record 2006 Full Size Image Photographer Sarah Anderson
	Description K2 Forward Cass Instrument Panels Accel cbls Date of image Full Record 2006 Full Size Image Photographer Sarah Anderson
	Description K2 Forward Cass Instrument Accel Date of image Full Record 2006 Full Size Image Photographer Sarah Anderson
	Description K2 Forward Cass Instrument JB Date of image Full Record 2006 Full Size Image Photographer Sarah Anderson
	Description K2 Forward Cass Instrument FCCCP Longshot Date of image Full Record 2006 Full Size Image Photographer Sarah Anderson

Software

- DBMS – Database Management Systems
- InMagic DB/TextWorks
- InMagic DB/WebPublisher PRO

INMAGIC

How does it work?



Intranet Browser

Search Request



HTML query response



Web server running
WebPublisher PRO

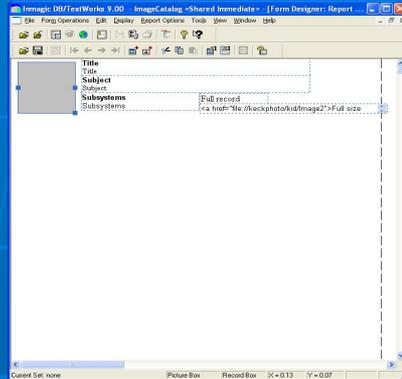


LAN Client running
DB/TextWorks

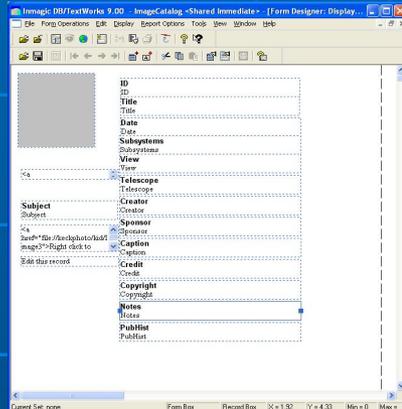
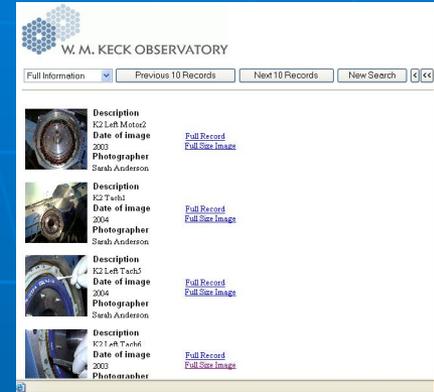
Data Management



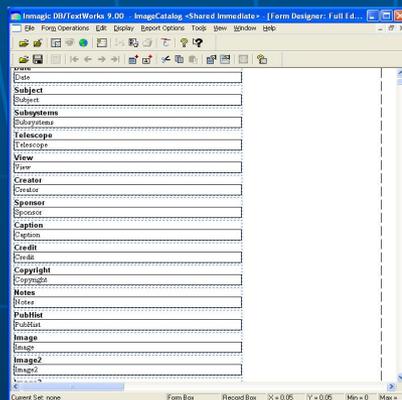
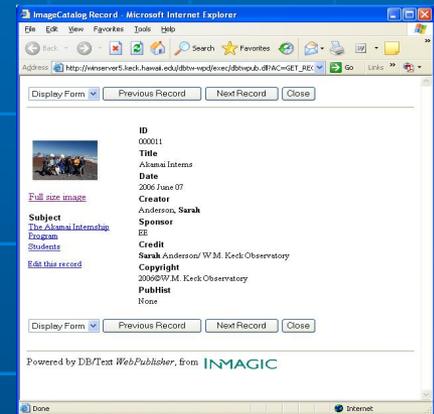
Creation Process



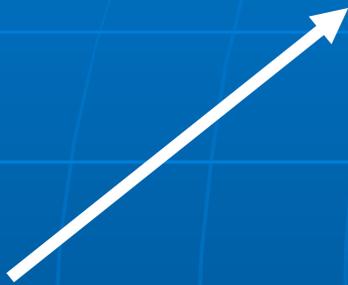
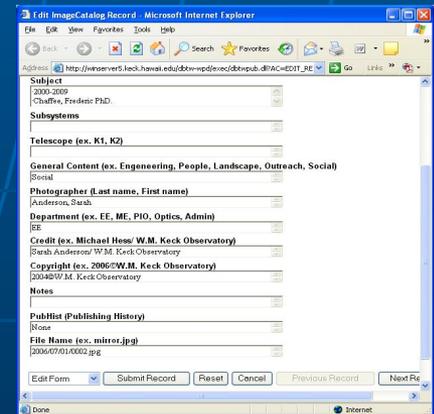
Report Form



Display Form



Edit/Submit Form



Query Screens

Keyword search

Search ImageCatalog - Microsoft Internet Explorer

Address: http://winserv5.keck.hawaii.edu/dbtw-wpd/ImageCatalog/ImageKeyword.htm

W. M. KECK OBSERVATORY
Image Catalog

Keyword:

[Advanced search](#) [Add new image](#)

Search Examples:
1.) Use & for "AND" (eg. chaffee & nelson)
2.) Use / for "OR" (eg. panel / board)
3.) Use ! for "NOT" (eg. students ! akamai)
4.) Use * to truncate (eg. mech* = mechanic, mechanical, mechanism)



Powered by DB/Text WebPublisher, from **IMAGIC**

Advanced search

Search ImageCatalog - Microsoft Internet Explorer

Address: http://winserv5.keck.hawaii.edu/dbtw-wpd/ImageCatalog/ImageCatalog.htm

W. M. KECK OBSERVATORY
Advanced Search

[Back to keyword search](#)

ID:

Date:

Telescope:

View:

Department:

Photo Credit:

Notes:

Title:

Subject:

Subsystems:

Photographer:

Caption:

Copyright:

PubHist:

Keyword (searches all fields):

[Add new image](#)

Search Examples:
1.) Use & for "AND" (eg. chaffee & nelson)

Inmagic Word Wheel 3.0: Photographer

Find:

Choices List: Number of entries pasted: 0

Hits	Keys
37	Hess Michael
1	Kissner Leslie
1	Laub Ron
2	Perala S Andrew
1	Stonski Paul

Words List Terms List Field:

Java Applet Window

How does it work?

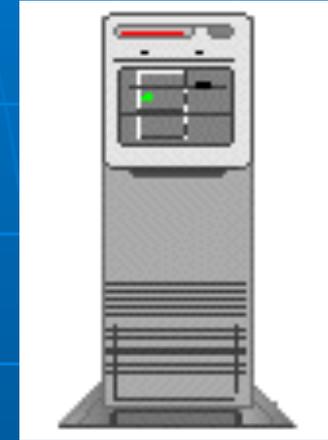


Intranet Browser

Search Request



HTML query response



Web server running
WebPublisher PRO



LAN Client running
DB/TextWorks



Import Process

- One record at a time
- Web importing
- File import

Microsoft Excel - Import1.csv

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
ID	Title	Date	Subject	Subsystem	Telescope	View	Creator	Sponsor	Caption	Credit	Copyright	Notes	PubH	Image	Image
380	000379	NonAluminized Segr	2000 - 2009 Mirr	Mirror, Segment	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
381	000380	NonAluminized Segr	2000 - 2009 Mirr	Mirror, Segment	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
382	000381	NonAluminized Segr	2000 - 2009 Mirr	Mirror, Segment	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
383	000382	NonAluminized Segr	2000 - 2009 Mirr	Mirror, Segment	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
384	000383	NonAluminized Segr	2000 - 2009 Mirr	Mirror, Segment	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
385	000384	NIRSPEC Slitwheel -	2000 - 2009	NIRSPEC	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
386	000385	NIRSPEC Slitwheel -	2000 - 2009	NIRSPEC	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
387	000386	NIRSPEC Slitwheel -	2000 - 2009	NIRSPEC	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
388	000387	NIRSPEC Slitwheel -	2000 - 2009	NIRSPEC	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
389	000388	NIRSPEC Slitwheel -	2000 - 2009	NIRSPEC	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
390	000389	NIRSPEC Slitwheel -	2000 - 2009	NIRSPEC	Engineering	Hess, Michael	ME			Michael Hess2000@W.M. Keck Ob	None	2006/07/06 200			
391	000390	Mike DiVittorio takes	1990-1999 DiVit	Mirror, Segment	Engineering			Optics			1999@W.M. Keck Ob	None	2006/07/06 200		
392	000391	Fred Cha	200402	2000-2004 Chaff	Dome				Kissner, Leslie	Admin	Leslie Kissne2004@W.M. Keck Ob	None	2006/07/06 200		
393	000392	Waimea	199912	1990-1999 Waimea	Mauna Kea H	Scenery	Storment, JR	Admin	JR Storment/	1999@W.M. Keck Ob	None	2006/07/06 200			
394	000393	W.M. Ke	199912	1990-1999 WWW	Graphic		Scenery	Perala, S. Andrew	Admin	Andrew Peral	1999@W.M. Keck Ob	None	2006/07/06 200		
395	000394	Keck intr	1998	1990-1999 WWW	Graphic				Admin		1998@W.M. Keck Ob	None	2006/07/06 200		
396	000395	Man star	1999	1990-1999	Dome	K1	Scenery					None	2006/07/06 200		
397	000396	W.M. Keck Telescop	Graphic	Telescope Light	path			Admin				None	2006/07/06 200		
398	000397	Waimea	199912	1990-1999 Mauna	Kea Waimea Sn	Scenery	Storment, JR	Admin	JR Storment/	1999@W.M. Keck Ob	None	2006/07/06 200			
399	000398	Gray win	199912	1990-1999 Maur	Dome	K1 K2	Scenery		Admin		1999@W.M. Keck Ob	None	2006/07/06 200		
400	000399	Waimea	199912	1990-1999 Waimea	Mauna Kea H	Scenery	Storment, JR	Admin	JR Storment/	1999@W.M. Keck Ob	None	2006/07/06 200			
401	000400	Santa's v	199912	1990-1999 Keiki	Christmas Party	C	Social		Admin		1999@W.M. Keck Ob	None	2006/07/06 200		
402	000401	K1 and K	199605	1990-1999		K1 K2	Scenery	Stomski, Paul	SW	P.J. Stomski	1996@P.J. Stomski	None	2006/07/06 200		
403	000402	Keck veh	199911	1990-1999 VSQ	Construction		Scenery	Laub, Ron	Admin	Ron Laub/ W	1999@W.M. Keck Ob	None	2006/07/06 200		
404	000403	VSQ Ph	1997	1990-1999 Snow			Scenery	Perala, S. Andrew	Admin	Andrew Peral	1997@W.M. Keck Ob	None	2006/07/06 200		
405	000404	Acton in Action on A	2000-2009 Acto	AO			Engineering		Optics			None	2006/07/06 200		
406	000405	Astronomer working i	Observing Steidel,	Chuck K1			People		Observing			None	2006/07/06 200		
407	000406	Olivier Lai working on	Lai, Olivier Clean	AO			Engineering		Optics			None	2006/07/06 200		
408	000407	Student working in th	Students Lopes,	Shordon			People		EE			None	2006/07/06 200		
409	000408	K2 Laser	2002	2000-2009 Sum	Laser	K2	Engineering	Contos, Adam	Optics	Adam Contos2002@Adam Contos	None	2006/07/06 200			
410	000409	K2 Laser	2002	2000-2009 Sum	Laser	K2	Engineering	Contos, Adam	Optics	Adam Contos2002@Adam Contos	None	2006/07/06 200			
411	000410	K2 Laser	2002	2000-2009 Sum	Laser	K2	Engineering	Contos, Adam	Optics	Adam Contos2002@Adam Contos	None	2006/07/06 200			
412	000411	K2 Laser	2002	2000-2009 Sum	Laser	K2	Engineering	Contos, Adam	Optics	Adam Contos2002@Adam Contos	None	2006/07/06 200			

Good to go?

Search ImageCatalog - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://wserver5.keck.hawaii.edu/dbtw-wpd/ImageCatalog/ImageKeyword.htm

W. M. KECK OBSERVATORY
Image Catalog

Keyword _____

[Advanced search](#) [Add new ir](#)

Search Examples:
 1.) Use & for "AND" (eg. chaffee & nelson)
 2.) Use / for "OR" (eg. panel / board)
 3.) Use ! for "NOT" (eg. students ! akamai)
 4.) Use * to truncate (eg. mech* = mechanic, mech

Submit Query Reset 

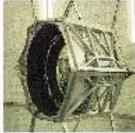
Powered by DB/Text WebPublisher, from 

W. M. KECK OBSERVATORY

Full Information Previous 10 Records Next 10 Records New Search < <<

	<p>Description K2 Left Motor2</p> <p>Date of image 2003</p> <p>Photographer Sarah Anderson</p> <p>Full Record Full Size Image</p>
	<p>Description K2 Tach1</p> <p>Date of image 2004</p> <p>Photographer Sarah Anderson</p> <p>Full Record Full Size Image</p>
	<p>Description K2 Left Tach5</p> <p>Date of image 2004</p> <p>Photographer Sarah Anderson</p> <p>Full Record Full Size Image</p>
	<p>Description K2 Left Tach6</p> <p>Date of image 2003</p> <p>Photographer</p> <p>Full Record Full Size Image</p>

Full Info - Tabular Previous Records Next 10 Records New Search < <<

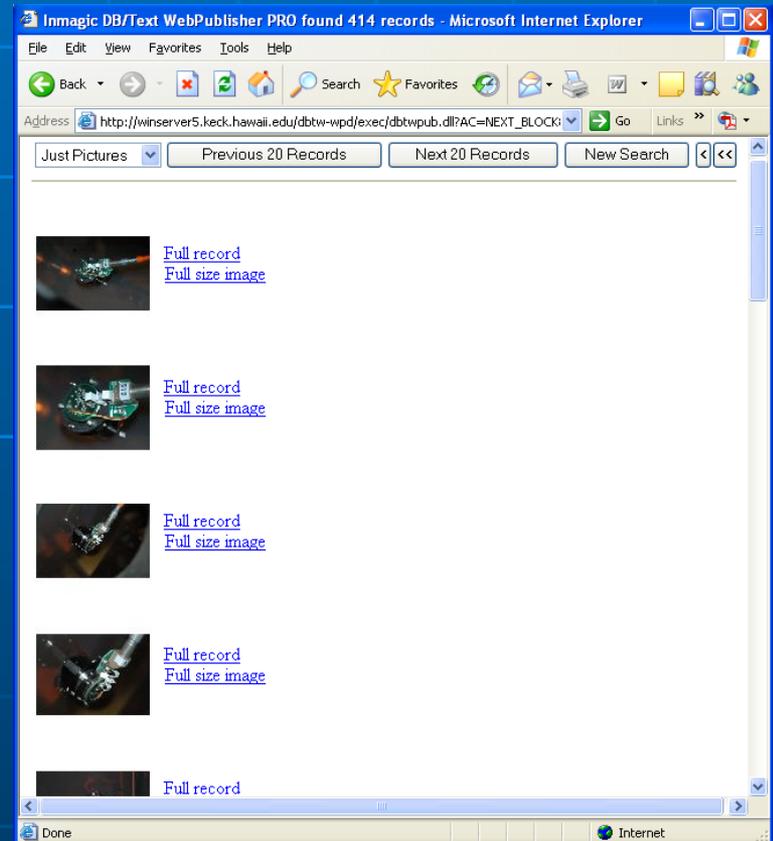
	Description	Date of image	Photographer
	Keck Secondary Mirror	2006	Sarah Anderson
	K2 Forward Cass Instrument Panels Accel cbls	2006	Sarah Anderson
	Analog Drive Logic Cards	2001	Sarah Anderson
	K2 Computer Room	2006	Sarah Anderson
	K2 Computer Room	2006	Sarah Anderson

Done

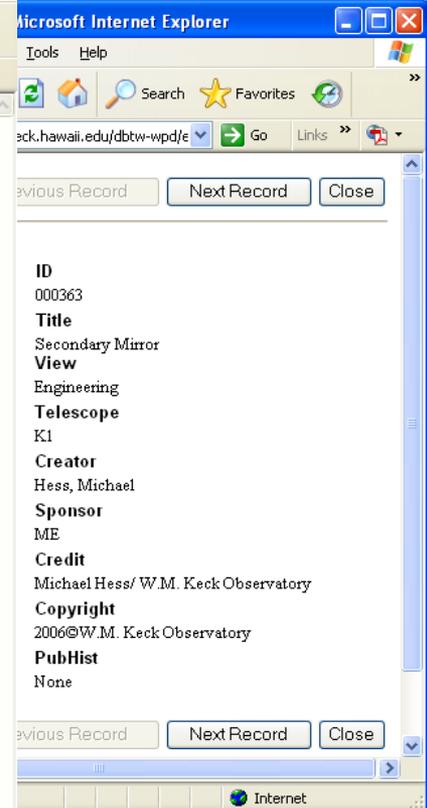
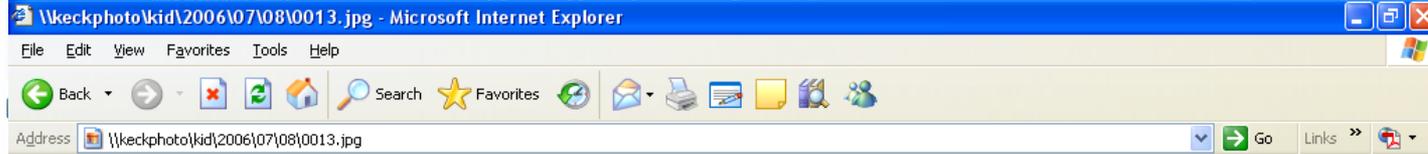
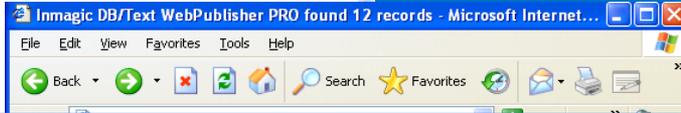
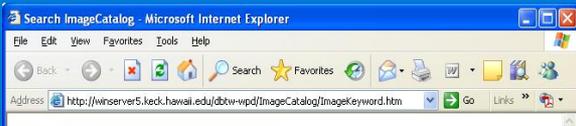
Solution

- Thumbnails
- Script

```
#!/bin/sh
destination='k:/2006/07/11/'
counter=1
if [ ! -d $destination ]; then
  mkdir $destination
  echo 1 > $destination/lastnumber.txt
else
  counter=`cat $destination/lastnumber.txt`
fi
ls t*.JPG | while read source
do
  filename="$destination/$counter.jpg"
  cp $source $filename
  jpegtopnm.exe $source | pamscale -xyfit 100 100 | pnmtojpeg.exe > $destination/${counter}_t.jpg
  echo cp $source $destination/${counter}_t.jpg
  counter=`expr $counter + 1`
  echo $counter > $destination/lastnumber.txt
done
```



The Database



Acknowledgements

- Peggi Kamisato
- Shui Kwok
- Sarah Anderson
- Malika Bell
- W.M. Keck Observatory
- University of Hawai'i at Hilo
- Funding provided through the Center for Adaptive Optics, a National Science Foundation Science and Technology Center (STC), AST - 987683