First Light, Great Basin Observatory, Great Basin National Park:

Funded by the Great Basin National Park Foundation, this is the first research-grade observatory built within a National Park. The observatory is in a remote area of the park, and it is unmanned. All observing is done <u>remotely with ACP Expert</u>. It is used continuously by students at four universities in Nevada, Utah and Irvine, CA. The observatory was designed and installed by Paul Gardner of Observatory Systems.



Bob Denny with Paul Gardner and Jason Simison of Sea West Systems, the general contractor. At the ribbon cutting Paul showed off the remote capability of ACP by opening the dome for the first time with his cell phone!



GBO unmanned control room: Students enter their observing plans remotely via PC, iPad or even cell phone; and the dispatch scheduling function in ACP Expert optimizes each session's work according to parameters entered in plans, sky conditions and weather.

SPIRIT Remote Telescopes, Western Australia:

Years ago, Paul Luckas of the University of Western Australia conceived of providing students of all ages with a remote observatory. He brought his dream to life as the SPIRIT Remote Internet Telescopes. The goal is to provide usage of the telescope to all teachers and students in Western Australia. It has grown quickly, and recently he brought a second remote observatory online. Both use ACP Expert to provide web/mobile astronomy to students all over the territory.





First Light, Mary Reagan Observatory, College of the Desert – Mecca, California:

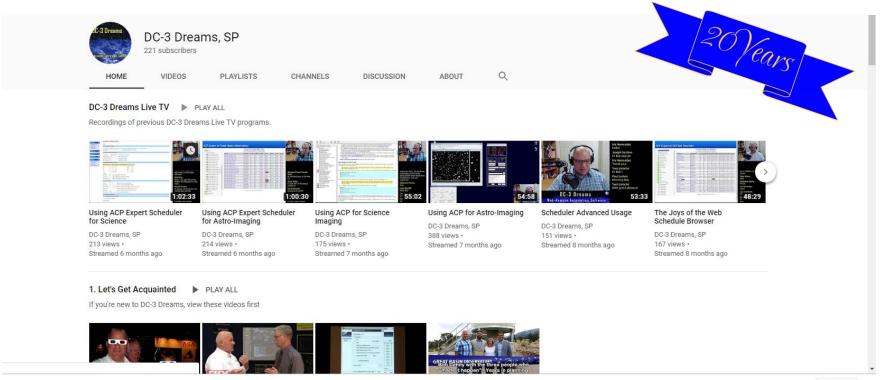
This is PlaneWave CDK1000 (one meter telescope) serial number one. It was donated to College of the Desert by Ivoj Kudrnac of Palm Desert, California. The students had a drone flying over to take this photo. The observatory was installed by Paul Gardner of Observatory Systems.

Bob and Stephanie

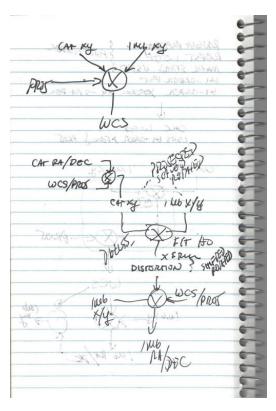


ACP Expert enables remote observing by students and faculty.

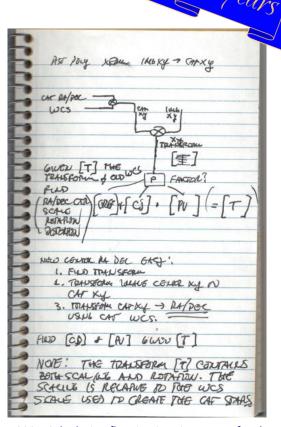
Learn more about DC-3 Dreams and our products on our YouTube channel: https://www.youtube.com/dc3dreamsastro



DC-3 Dreams is proud to celebrate our 20th Anniversary in business! Let's take a look back at where it all began.

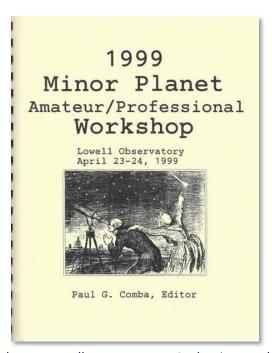


Early 1998 - PinPoint conceptual block diagram. Note that distortion correction was considered from the outset.

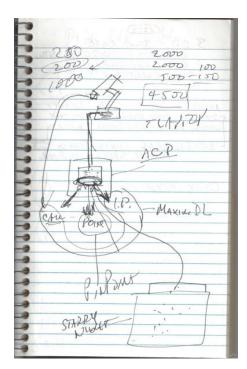


Early 1998 - Calculation flow in PinPoint except for the iterative part where some of the magic was at that time.

A look back at 20 years for DC-3 Dreams...



This is where we really got our start. At the time we had focused ACP, PinPoint and Visual PinPoint on asteroid detection and measurement. Two of our customers were the first amateurs to be deemed "surveys" by the Minor Planet Center!



Mid-1999 Conceptual Block Diagram of the expanded multi-mission ACP Observatory Control Software.

DC-3 Dreams, SP

6665 East Vanguard Street Mesa, AZ 85215 Phone +1 480 396 9700

For Release May 5, 2001

Contact: Bob Denny (starting Monday May 7) Email rdenny@dc3.com http://ACP.DC3.com/

News Release

Robotic Observatories Can Be On the Web in Less Than 30 Minutes

New ACP includes an integrated web server, eliminating proprietary Internet protocols and expensive client software.

Tucson, Arizona, May 5, 2001 — DC-3 Dreams today announced the world's first off-the-shelf web-based internet observatory control program, ACP Version 2. This new software package includes an optional integrated web server that provides remote Internet operation of robotic observatories by people anywhere in the world using only a standard web browser and no other special software. A set of pre-written web pages is also included. Based on widely used Internet technologies and open standards such as HTML, ASP, and ASCOM, ACP Version 2 makes it possible for individuals, clubs, and schools to provide effortless remote access to robotic observatories without complex client-server packages and without high cost proprietary software at the client end.

"Actually, ACP can be installed in under ten minutes by someone who is familiar with it," remarked Robert Denny, developer of ACP. "The remaining twenty minutes is for calling your friends and telling them to take some images. They need only to get on the web and log in to your new observatory web site," he continued. "As soon as you start ACP, your observatory is on the web. Telescope control is provided via ASCOM by ACP. CCD camera control is provided via ASCOM by Cyanogen Productions' MaxIm DL/CCD (sold separately).

ACP 2 will be released in two versions, with a third package coming later this year. The standard version provides local control and automation of the robotic observatory. The professional version includes the integrated web server and adds support for multi-user remote Internet/web operations. A future upscale version will include a request queuing facility and an optimizing scheduler that can maximize observing efficiency.

Press release announcing shipping availability of ACP's "Instant Web Remote Astronomy" in May 2001. You install ACP, start it, and your observatory has its own web page.

DENNY



I.A.P.P.P. WESTERN WING (USA)

18TH ANNUAL ASTRONOMICAL PHOTOMETRY AND CCD IMAGING SYMPOSIUM

PROGRAM

MAY 26 - 28, 1999

LAKE ARROWHEAD RESORT LAKE ARROWHEAD, CALIFORNIA 1999 - Bob's first conference as developer of ACP. The IAPPP has grown into the Society for Astronomical Sciences. We have sponsored and attended as exhibitors for 20 years.

Web-Remote Automation Software

AIC 2005 – Doubletree Hotel, San Jose



2005: Our first year exhibiting with a modest booth at AIC.



Adam Block and Dr. Don Goldman

AIC 2006 – Doubletree Hotel, San Jose



2006: DC-3 Dreams was growing, and so did our booth size.



Some younger, familiar faces here!

Web-Remote Automation Software

AIC 2007 – Doubletree Hotel, San Jose



A typical "after hours" conference



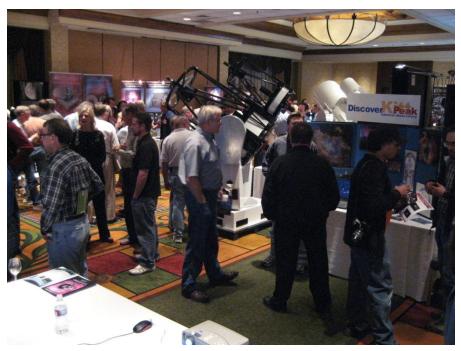
A much smaller exhibit hall then

Web-Remote Automation Software

AIC 2008 – Doubletree Hotel, San Jose



We all had fun with the 3-D glasses that year! What were they for?



The audience was getting much larger, and we were outgrowing the exhibit hall.

Web-Remote Automation Software

AIC 2009 - Doubletree Hotel, San Jose



John Smith, CCDWare and Tim Cann, Chronos



Doug George, Diffraction Ltd; Dennis Di Cicco, Sky & Telescope; and Peter Ceravolo, Ceravolo Optical Systems

AIC 2010 - Santa Clara Convention Center



Attendance at AIC was getting much larger, and the conference moved to the Hyatt Regency Hotel/Santa Clara Convention Center.



Stephanie Denny at the DC-3 Dreams Booth

AIC 2011 - Santa Clara Convention Center



Bob Denny was interviewed by Dennis Di Cicco of Sky & Telescope Magazine for a video about DC-3 Dreams and ACP Expert, published on their website. There is still a copy of this video on the <u>DC-3</u> <u>Dreams YouTube Channel.</u>



Dennis Di Cicco with Bob & Stephanie Denny at the DC-3 Dreams Booth

AIC 2012 - Santa Clara Convention Center



Two industry luminaries, Mike and Lynn Rice of New Mexico Skies.



Bob Denny made his way around the AIC conference on a Segway. Imagine riding one of these after a late night "conference" session. $_{16}$

AIC 2013 – Santa Clara Convention Center

We introduced ACP Expert, which includes ACP + Scheduler to optimize observing time.

Get the Most From Your Observatory!

ACP Expert[™] manages your observatory 24/7, feeding the images it acquires into the cloud. Give it work months in advance. When the weather is good and it's dark, it gets the job done.

DC-3 Dreams Software



http://dc3.com

Web-Remote Automation Software

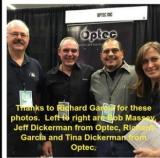
AIC 2015 – San Jose Convention Center



Bob Denny gave his talk at the DC-3 Dreams booth, after a mix-up with breakout rooms.



AIC 2015 SPONSOR





Web-Remote Automation Software

AIC 2017 - San Jose Convention Center



Pre-conference fun



Congratulations to Mike Rice!

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