Operation Phototrack 5007

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Introduction

I do a fair amount of family research and documentation which probably helps qualify me as some kind of researcher. And, fortunately, I have the time today to invest in writing about things from the past, and so I do just that. Of course, one of the challenges of doing historical research and writing about things past, is the problem of thinking something is simple and easy to document, and learning once you have gotten into it that you have just opened Pandora's box. This happens to me all the time, and such is the case of this one segment of my past – a period of time that helped give my life some focus but what started out as a few pages is now much larger, as you will see.

I'm referring to my personal introduction to a bunch of bright guys who helped me learn about, and focus on, the scientific and technical aspects of life, ham radio communications, Civil Defense, and satellite tracking. Like all adventures that we get into, we often don't even know we are involved in a life adventure – we get immersed in the activities and just do it. No inhibitions. No problems. It's just a young person's magnificent obsession with some project that helps them grow up and become adults who are then trained in and able to focus on, some particular aspect of life.

For me, satellite tracking at Phototrack 5007 was one of those projects. I had kind of bumbled my way into ham radio while in high school, courtesy of my neighbor across the street Earl F. Sunderland, Jr. (N1AXG). I went from novice class (KN1OSJ) into technician class (K1OSJ) in about six months. Once I connected with Warren Davis and the rest of the guys via ham radio, I was hooked on interesting stuff – not like the boring stuff in high school. This was a great learning period for me. Phototrack 5007, Walpole Civil Defense, ham radio work – it all gelled for me over about a two year period. I wish I had taken better notes of that time in life.

A few words about amateur radio (aka ham radio). Radio communications in the U.S. is mothered by (I use the phrase affectionately) the Federal Communications Commission (aka FCC). Amateur radio is a voluntary system of personal training, qualifications testing, and licensing individuals and groups to operate stand-alone non-commercial and non-governmental radio transmitting stations within a set of frequency ranges in the RF spectrum. Depending on the individual's level of qualified training and experience, he can operate different types of wireless RF communications (e.g. Morse code, AM, FM, TV, etc.) in different RF bands, usually referred to by the wave length grouping (e.g. 10 meters, 2 meters, etc.).

Back to Phototrack. The application for the Phototrack 5007 satellite tracking operation had been applied for by Warren Davis during International Geophysical Year (circa 1957), and when I joined the group in 1961, the physical operation had been moved from its brief location in Stoughton, MA to Walpole, MA, where our group built the tower and the supporting cabin. I am fortunate to still have contact with Warren, and you will find his comments spread throughout this short story about Phototrack 5007. Warren has kept an amazing amount of information from those early days a half century ago when we were all young bucks growing up in eastern Massachusetts. I am very grateful for Warren's contributions to this story.

By the way, let's not forget that all of this 'space' activity happened in the slide rule era – there were no computers to help with the calculations, in fact, there were not even any hand calculators. Everything was done manually and by knowing how to create and use formulas – this was more Warren's strong suit than mine.

This story about Phototrack 5007 is, perhaps, our version of Homer Hickam's "October Sky." Everything happened during that exciting time in life after the Russians had woken up a sleepy America with their launch of Sputnik 1 in 1957, and told us that we needed to do some serious work if we were going to catch up with the rest of the world. Thank you Russia – 'ya done good.'

Regarding copyrights, I abstracted some of the text and a couple of images online, mainly from Wikipedia and from a few government web sites. If you are concerned that I have infringed in my not-for-profit use of any of, or some of this text, or of these images, you should contact me at my e-mail address noted below.

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Background

According to Wikipedia, **Operation Phototrack** was among the programs quickly organized in the United States, after the Soviet earth satellite Sputnik 1 was launched on 4 October 1957, to fill the temporary tracking gap until the Baker-Nunn cameras specially designed to optically track U.S. satellites became operational. Phototrack was also referred to as the "Independent IGY (International Geophysical Year) Tracking Coordination Program."

The **International Geophysical Year** was an international scientific project that lasted from July 1, 1957, to December 31, 1958. It marked the end of a long period during the Cold War when scientific interchange between East and West had been seriously interrupted. Joseph Stalin's death in 1953 opened the way for this new era of collaboration. Sixty-seven countries participated in IGY projects, although one notable exception was mainland China, which was protesting against the participation of the Republic of China (Taiwan).

Use of volunteers

Supported by the Society of Photographic Scientists and Engineers (later the Society for Imaging Science and Technology), Phototrack enlisted volunteers who had wide-angle optical instruments with film-recording capability. Volunteers were recruited with announcements in various magazines and newspapers. Like its contemporary volunteer visual-tracking program called Moonwatch, it continued for some years as a supplement to the Baker-Nunn operation, since its results could fill in for the main system's losses due to, for example, weather problems (earthbound satellite photography needs cloudless nights). Also like Moonwatch, some of its volunteers were located in countries outside the U. S, such as Canada, Australia and Japan.

Operation Moonwatch (also known as Project Moonwatch and, more simply, as Moonwatch) was an amateur science program formally initiated by the Smithsonian Astrophysical Observatory (SAO) in 1956. The Smithsonian organized Moonwatch as part of the International Geophysical Year (IGY) which was probably the largest single scientific undertaking in history. Its initial goal was to enlist the aid of amateur astronomers and other citizens who would help professional scientists spot the first artificial satellites. However, until professionally manned optical tracking stations came on-line in 1958, this network of amateur scientists and other interested citizens played a critical role in providing crucial information regarding the world's first satellites.

And a few words about the **Baker-Nunn cameras**. The original Baker-Nunn cameras (BNC) were f/1, 50cm aperture modified Schmidt telescopes originally created by the Smithsonian Institution (Henize, 1957) to photographically observe artificial satellites. The superb optical design of the camera achieved a fast response (f/1) yielding out extraordinary useful field of view (FOV) of 5°x30° with a spot size inferior to 20 microns throughout the field. This turned BNC into an extraordinary instrument in spite of its manually altazimutal movement and the use of curved 55cm cinemascope film as detector.

Time exposure photographs

This B/W image [on the right] is an example of some typical images submitted to Operation Phototrack by participating volunteers.

The photographs produced were time exposures in which a satellite's track appeared as a long, usually slightly curved, line seen against a background of stars. If the camera were stationary, the tracks of the much more slowly moving stars appeared as much shorter lines, which were portions of arcs about the pole. If the volunteer had a motor-driven polar-axis camera mount that countered the earth's rotation, the stars were represented by dots whose sizes depended on the resolution of the camera lens and the magnitude of the star.

With knowledge of the camera's latitude/longitude position and its elevation above sea level, both obtainable from USGS (U. S. Geological Survey) 7½-minute quadrangle maps (before the days of Global Positioning System devices), comparison of the track with the star background could define the satellite's successive positions. To correlate those positions with times, breaks in the lines were created by interrupting the exposures at times known by their relationship with radio time signals broadcast by the U. S. National Bureau of Standards.

Suitable times for making photos were when the observer's sky was dark enough to show stars but the very high altitude satellite was directly illuminated by the sun. Most such times were during the two hours before dawn or after sunset at the observer's location, but vehicles reaching sufficiently southerly or northerly latitudes were sometimes illuminated by sunlight coming over the polar regions.

Film requirements

The program required negatives submitted for measurement to be at least 4 by 5 inches (over 100 by 125 mm) in size and the lens to have a focal length of at least 5 inches. The film was to be as light-sensitive a type as could be obtained on the non-professional market and strongly developed to further increase that sensitivity. Measurement of such negatives could determine the locations of multiple points along the satellite's path within 150 feet, or about 50 meters.

Project management

Phototrack was directed by Norton Goodwin, who was also an author, along with L. N. Cormier and R. K. Squires, of a manual for prediction of satellite observing times from modified orbital elements, in which "modified" meant earth-centered orbital elements using longitude and latitude as coordinates rather than astronomers' declination and right ascension. Procedures described in that document were to be used by program

participants for making calculations to determine times and aiming directions for using their instruments.

Computation handbook

Goodwin was also the listed author of another program booklet containing tables of trigonometric functions. An unusual feature of these tables was the specification of angles in "turns", one turn being 360 degrees, or 2pi radians. They were calculated for "every tenth microturn", which referred to the ordinal tenths, not the fractional tenths. Those values, calculated on early digital computers, were made available to be used by Phototrack participants for making decimal calculations. Besides a "limited draft edition" of the computation handbook, published in August 1958, a later version was published by the National Academy of Sciences – National Research Council in January 1959 as Number 7 in its "IGY Satellite Report Series". The book of tables was also re-published by the Society of Photographic Scientists and Engineers in 1964.

Observer updates

Observers were provided with sufficiently frequent updates of the orbital parameters of known objects, based on past observations, to permit each to work out his own predictions of suitable looking times and directions for his own location. Updates were sent primarily by postal mail in the form of about weekly postcards, but some information was available by radio. The data provided on the cards were the modified orbital elements used in the handbook calculations. That being before either home computers or even electronic calculators existed, most program participants had to do their calculations, including long divisions, either manually or with mechanical calculating devices.

Final analysis

Exposed negatives containing good tracks and star backgrounds and clear time markers were sent to the program, which forwarded them to trained analysts for measurement. Although little evidence of a satellite's distance from the observing station was available from any single negative, and exposures at different stations did not occur simultaneously, combining of the results from several stations, plus accurately measurable items such as the orbital period, allowed parameters of credible smooth orbital paths to be derived.

Operation Phototrack 5007

Warren had applied for the Phototrack membership before the fall of 1959 when he first went off to MIT. By 1961, there were seven active members of Phototrack 5007 including: Warren Davis (W1APB), Pete Mudgett (W1HKJ), Louis Coburn (K1MLZ), Ralph Barstow, Dick Dixon, Bob Lottero (K1GRY) and John Sutherland (K1OSJ). All of us were hams. Pete's call today is KB1PBA – I don't remember the call signs for Ralph and Dick. In addition to being involved in Phototrack, we were all active participants in Walpole Civil Defense whose operations were based in the Walpole Police Department basement, which, coincidentally enough, was also the location of the Walpole Amateur Radio Club. Who would have guessed?

The Walpole Physical Site

Warren Davis comments: *"The tower made of donated (I forget from what railroad we got them – maybe B&M) 'used' railroad ties was first erected on Stoughton town land (with permission from Stoughton, of course), but vandals came along and toppled it. Fortunately, no one was seriously injured or killed as far as was ever known [the vandals were never identified]. But, to prevent it from happening again, we moved operations to private land isolated in the woods at* [Buttimer's] *Sunny Rock Farm* [in Walpole, MA]. *Also, when we rebuilt it, we nailed the crossed ties together with the mother of all spikes. At Stoughton, the ties had merely been stacked up with no nailing.*

"I'm not sure when we built the first tower in Stoughton. But, if you can recall when we started to build the station in Walpole, I can tell you it wasn't long before that. The tower in Stoughton had not been up long when it was toppled (a week or two, maybe), and we moved everything promptly after that. No Phototrack observations were ever made at the Stoughton site. All that ever happened there was the construction of the tower, and nothing else.

"Also, all of the materials used to make the cabin were donated, except possibly for a few things such as the cement used to make the pillars upon which the building was built.

"When we had framed and were nailing down the floor (walls not yet erected), a certain John Sutherland, upon accidently slamming his thumb with his hammer, uttered the words that ring in my ears to this day. With his other hand holding his hurt thumb high in the air he yelled so loudly it could be heard in Chelsea, "Prick of misery!!! I've never forgotten those words, and I never will! It was the perfect example of what Mark Twain meant when he said "Under certain circumstances, urgent circumstances, desperate circumstances, profanity provides a relief denied even to prayer."

[This color photo of the cabin, was taken circa fall 1961.]

"Unfortunately, for all our effort, the idea of using stacked railroad ties was not a good one. The tower was nowhere near rigid enough and the camera moved slightly at the most minor provocation. Of course, this did not affect the lat/long of the camera [Lat 42.08.05.00, Long 288.44.50.00] *in any way that could possibly be measured, but it did cause the time lapse images to streak -- not a good thing."*

The Camera we used

The camera we used at Phototrack 5007 was a World War II K-24 camera, developed in 1942, and a modification of the British F-24 camera. The K-24 camera is 10 pounds lighter than its British counterpart. More than 9,000 K-24 cameras were made for use in tactical reconnaissance aircraft in World War II, including the Supermarine Spitfire, the North American F-6 (modified P-51), and the Canadian-built De Havilland F-8 (modified Mosquito). The K-24 camera had two basic functions: night aerial reconnaissance and orientation, or verifying a bomber's position over a target when a bomb is released. This camera was manufactured by Eastman Kodak Co.

[K-24 camera photo on the left]

Warren continues: *"I purchased the camera (circa 1958), I think, from a mail order war surplus catalog (not 100% certain where/how I purchased it). Might possibly (but less likely) have been ELI Heffron in Cambridge.*

"Also, I don't know if you recall, but the satellite streaks were chopped once a second by a paddle that rotated in front of the camera lens. Angles to the satellite were given by the location of the track of the satellite relative to the known stars (and time of day) that also appeared in the image, and the time associated with each position was given by the short breaks in the track caused by the rotating paddle.

"I used a 60 rpm synchronous motor to drive the paddle, and I arranged that a small pin on the back end of the paddle would interrupt a low level light shining on a photocell to create a pulse that could be displayed on an oscilloscope every time the paddle was dead center in front of the camera lens. The idea was simultaneously to view those pulses and the ticks every second from the WWV time signal on an oscilloscope and to adjust the phase of the rotation of the paddle (for this, I had a little worm gear mechanism on the motor mount to rotate the motor about its own axis) so that each blanking of the satellite track occurred exactly on the second.

"*But, since we had no commercial electricity at the site* [we used a gasoline powered generator], *it was nearly impossible to provide AC to the synchronous motor anywhere nearly accurate enough to hold the camera pulses in sync with WWV. In fact, it was impossible.*

"So, the timing problem was the second reason (in addition to the wobbly tower) why 5007 was never able to generate useful tracking data. With the technology of the day and short of erecting a cement tower, it was beyond our means to overcome the problems."

MIT Doc Edgerton

Warren's comments: *"Doc Edgerton [Harold Eugene "Doc" Edgerton was a professor of electrical engineering at MIT] did not donate anything tangible to the Phototrack 5007 project. However, as you know, I was then an undergraduate at MIT and I did consult with Doc Edgerton about the possibility of designing a magneto-optical shutter for the K-24 camera. [Edgerton was using magneto-optical shutters in his high speed photography work.]*

"A magneto-optical shutter consists of a cylindrical hunk of glass with crossed polarized filters on its two ends. In that state, light entering one end of the cylinder cannot pass through the polarizer at the other end of the cylinder. But, if a coil is wound around the glass cylinder and enough current is passed through the coil, the magnetic field within the glass can cause the plane of polarization of light passing along the axis of the cylinder to rotate 90-degrees so that, by the time it reaches the further end of the cylinder, it can pass through the otherwise crossed polarizer at the exit end. Since the magnetic field can be applied and removed very quickly, the device serves as a very fast shutter with no moving parts.

"The problem with the paddle (see my earlier comments) rotating in front of the K-24 camera lens is that, even though it is close to the lens and way out of focus, nevertheless not all points within the focal (image) plane are extinguished at the same time (because the paddle moves slowly across the lens opening). So, I had to make careful determinations of the contours of iso-time-of-maximum-extinction over the entire focal plane, and, strictly, those data had to be factored in by those examining the images to allow for the variation of time (of satellite track extinction) across the image.

"My idea was that I might be able to design and build a magneto-optical shutter that would eliminate the time variation as a function of position across the focal plane. This would be because the magneto-optical shutter (functioning as a normally open, rather than normally closed, shutter having non-crossed polarizers at each end) could be made to interrupt the light entering the camera so quickly that time difference across the focal plane would be absolutely negligible (both because of the high speed of this type of shutter and also because there is no sweeping across the aperture. Rather, the entire aperture goes dark simultaneously (assuming a uniform magnetic field within the glass cylinder).

"To my dismay, in talking with Doc Edgerton, I realized that, because of the substantial size of the required hunk of glass, I'd have to charge up a bank of capacitors the size of an automobile (well, maybe not that large) in order to create a strong enough magnetic field to do the trick. Dead end.

"The only alternative was just as serious a dead end. If I could have designed optics such that the column of light maybe 2 or 3 inches in diameter entering the K-24 lens would first be squished down to a half or a quarter inch in diameter and a piece of glass of that diameter used instead for the magneto-optical shutter, the energy requirements would drop steeply. Of course, after exiting the narrow cylinder the light

would have to be expanded back up to its original diameter before entering the K-24 lens.

"I am not even sure it is theoretically possible to do this. But, I realized that, even if it were theoretically possible to manipulate the light in this way, I would be getting into a major project fabricating the necessary optics. Dead end.

"Anyway, there was after all a Doc Edgerton connection, but not in the sense of directly contributing anything tangible to the project."

The Gyro Table

"However, the gyro test table on which we mounted the camera came from MIT. I met with Dr. Draper in his penthouse that sat atop the Instrumentation Laboratory at 68 Albany Street in Cambridge (building now demolished) and described to him the project and why we needed a very stable platform upon which to mount the camera. The gyro test tables could handle the heavy camera. Moreover, the table surface could be rotated into any orientation so that pointing the camera in the right direction would be easy.

"He authorized me to take one of the gyro test tables that had been retired from service from the (basement of) 68 Albany Street and were being stored in the Metropolitan Storage Warehouse next to MIT.

Here's a B/W photo of the Walpole Phototrack 5007 site, taken in June of 1962 that shows the tower with the Gyro Table and camera installed, and four of the seven guys on the team: these would be (left to right) Ralph Barstow, Lou Coburn, John Sutherland, and Bob Lottero.

A Few More Random Things

"The K-24 camera had a focal plane shutter made of cloth. Of course, since we were doing time exposures on the order of a minute or more, we didn't use the focal plane shutter (it was simply withdrawn). But, on one occasion (circa 1959), I had set up the camera on a heavy tripod in another field at Sunny Rock Farm in order to try some satellite shots in the wee hours when a particular satellite was scheduled to pass by. After setting everything up (and, because it was near the street and buildings, I actually had commercial power there. More on commercial 60 Hz power below), I went home to get a few zzzzz's before returning for the event.

"It turned out that the Buttimers had left a cow to graze overnight in the field, though I was not aware that the cow was there. When I set up the camera, the cow had wandered off somewhere out of my view.

"When I came back at 3 AM, or whatever it was, I found the open back of the camera (I had left off the film canister) dripping with thick cow saliva. It was truly disgusting. Moreover, the damned cow had used its strong, tough tongue to reach in and consume the entire (I think 5"x5") cloth focal plane shutter. Geeeeeeeeeeeze! Apparently, the cow went for the sizing used on the cloth shutter.

A Cuppla Udda Minor Details

"I'm pretty sure that the incident with the cow occurred before we ever set up the Phototrack 5007 site. This is because the 1/2" thick steel angle brackets used to mount the camera to the top of the gyro test table were definitely NOT on the camera when I was doing the tests the night the cow chowed down. Once attached to the camera, I would not have removed the brackets for anything. For one thing, it is difficult to get at the screws holding the brackets to the camera from inside the camera body. Second, if removed, there would then be the problem of a total of eight holes in the sides of the camera body needing to be plugged to be light tight.

"Second minor detail. I find that actually a majority of the cloth focal plane shutter is still in the camera. Thus, the cow made only a partial meal of the shutter. Perhaps its taste was not up to her high standards or, perhaps, I happened along as she was chowing down and she opted to scram rather than be confronted by me.

"BTW, it turned out that commercial 60 Hz power was not good enough either. I.e., it wasn't close enough and steady enough to hold the synchronous motor and paddle in sync with WWV for more than a short time. You may recall that I called Edison (or whatever it was) to ask/complain about it and was told "We sell power, not frequency." Another dead end."

The Ham Radio Work

Since all of us were hams at the time, we naturally set up an operational ham shack in the small building. The site license was K1TWS. This picture on the right was taken during one of the many radio sessions we had. It turns out that Phototrack photography didn't involve very much daytime activity after we were all set up, and you can tell from Warren's earlier comments that it was touch and go for the whole

time we tried to photograph the satellites passing overhead at night.
In this photo taken inside the cabin, Warren is on the left in front of the very sophisticated multiband, superhet receiver that he had designed and built (dubbed the APB-6), and Lou is on the right, in front of the 2 meter Gonset Communicator (aka Goony Box). As I recall we did a lot of 2 meter activity, as well as a modest amount of ten meter activity. And yes, I believe that is a revolver on Lou's hip.

Warren adds: *"On the design of the receiver (the APB-6), it was functionally similar to the Collins 75A-4. In fact, it had some features even the 75A-4 did not have. "*

"I can pinpoint the design and construction of the APB-6 fairly well because I still have a copy of my layout sheet for punching and drilling all the holes in the chassis, which sheet is dated August 1, 1956. BTW, the layout sheet shows 17 vacuum tubes but the ABP-6 ended up having a total of 19 vacuum tubes, many of which were dual. That is, two vacuum tubes within one glass envelope. I think the whole thing was completed and operational by March, 1957. It took a while as I was doing the detailed electronic design as I went along, which accounts for the two additional tubes by the time it was done.

"Also, the APB-6 was used with one of the stations set up in the field by the Walpole Amateur Radio Club for the ARRL Field Day. I have a photo dated June 22, 1957, of me at that station.

"I had already been using the APB-6 in my ham work for quite a while when the Soviets launched the first Sputnik on October 4, 1957. Since I had designed the APB-6 myself, I had no hesitation to tear into the "front end" of the receiver to modify it so that it would tune at least one of the two frequencies used by the Sputnik (I believe it was the 20.005 MHz frequency). It was from this that I got the idea that I could use the Doppler effect on that signal as the satellite passed to derive orbital parameters on my own."

Where are we now?

In December, 2013, I sent out a Christmas letter to Warren, Pete, and Lou, trying to re-establish contact, and only Warren responded. Warren was able to add Bob Lottero's contact info, but he had no location information for Ralph or Dick.

So, this is the [redacted] list of addresses I have at present for the Phototrack 5007 team from that time period about 53 or so years ago when we all wore younger man's clothes.

Peter S. Mudgett	Louis Coburn, Jr
Westford, MA	Norton, MA
Warren F. Davis	Robert J. Lottero
Newton, MA	Jefferson, NH

Warren's comments about locating Ralph and Dick:

"For Ralph Barstow, I can tell you that his younger brother was Roy Barstow, so if you found a Ralph Barstow with a relative Roy Barstow, you would likely be onto the right person. They both lived in Walpole, MA, in the Phototrack days, but that may be too far back to show up in the Intelius residence info.

"Regarding Dick Dixon, I have even less to suggest. Back then, Dick had a girlfriend, Gail Greenwood, but I suspect they never married. But, if they did, Intelius might list a Dick or Richard Dixon with a relative with the first name Gail. Again, in that case you could almost certainly be onto the right person. Also, Dick lived in Stoughton, MA, at the time but, as with the Walpole residence for Ralph, Stoughton may not show up for Dick even if you have the right Dick Dixon.

"Another approach that sometimes can get one onto the track, is obituaries. For example, if you find an obit for a Dixon who once lived in Stoughton, MA, the obit will almost certainly list the children of the deceased. If one of the children (actually, I think Dick was an only child, but I wouldn't want to go to the gallows on that) was named Dick/Richard it might well be the right Richard and the obit might mention the city/town of residence. From there you could check telephone listings online for that city/town. From there, a phone call could nail it."

As a side note, while we were active in Phototrack, Dick Dixon joined the Navy, and we all had a going away party for him at the Phototrack site. In this photo, left to right, are Ralph Barstow, Gail Greenwood, Dick Dixon, Warren Davis, Pete Mudgett, and Bob Lottero. Lou appears to be missing in this photo. I suspect I was behind the camera.

Final Thoughts

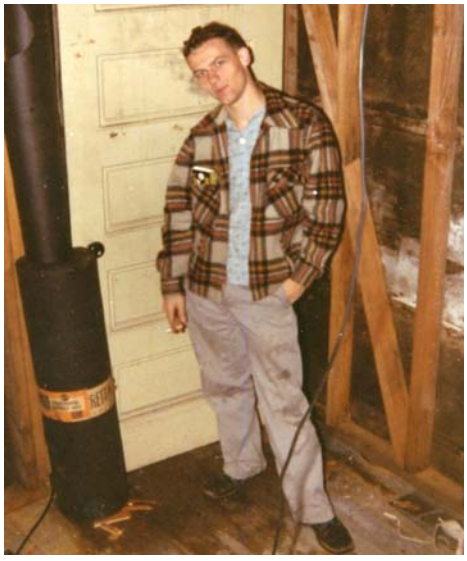
After an intense couple of years with ham radio and Phototrack, we all went off to do our own separate things. Several of us went off to college and sadly, we lost contact with each other through the years. I can remember during those Phototrack years working on car engines with Ralph and with Warren. I bought my first car from Warren ('52 Dodge, $75 as I recall). Warren, Pete and I later lived together in an apartment on Westland Avenue in Boston for a while. Bob, Pete, and Warren got married, as did I (eventually).

I also remember Warren and I had worked at a couple of places together, including Sylvania Electronic Systems and MIT/IL on the Apollo program, which caused me to look back and think about those times when we could buy a full meal for $.80 and buy a gallon of gas for about $.25. Think about that. In this age of continual, ongoing, and

undeclared wars (both domestic wars against 'nouns' and foreign military wars), economic hard times when the dollar isn't worth squat, and increased government controls over people, education facilities, and businesses, we might not have done any of these things today. What a shame.

Where, exactly are our BHAGs (Big Hairy Audacious Goals) like Phototrack and Apollo today? Have we Americans stopped learning and growing?

For me, I feel fortunate that Warren and I have reconnected in recent years so that the two of us could swap stories and tell this story about our times at Phototrack 5007. I think all of us seniors who survive this many years in life should tell our stories – otherwise, all those grand and glorious times we had as youngsters will be lost forever. And that would be sad.



John Sutherland and Warren Davis -- Phototrack 5007, circa 1962

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