

Request for Response to Z-film Hoax extracts. Rollie Zavada, 8/23/03

You asked me to respond to an extract of a specific section of David Lifton's contribution to a new book *"The Great Zapruder Film Hoax: Deceit and Deception in the Death of JFK"* by Professor James H. Fetzer. As I have not seen or read the full scope of Mr. Lifton's challenges to the authenticity of Zapruder's "In Camera" original retained by NARA, my depth of response may be somewhat limited or addressed to issues referenced elsewhere. I shall restrict my remarks to a few of the comments made by the author.

Extracts you provided are in *italics* and my comments follow.

□□□□□□□□ "In this instance, with the 16 or 35 mm "optical master" having been created, and the goal now being to create a "Kodachrome original", there would have to have been two passes made through the camera □ ^ one, with the sprocket holes masked out, to get the main image area exposed (as when making a "normal" print); and then a second pass (with the main area masked out and the sprocket hole area available) to put image in the sprocket hole area.

And then, having exposed the film in this manner □ 'having made two passes' the film (which if done as described, would be a composite of sorts) would then be sent out for processing (and to a Kodachrome plant, such as Hawkeye works)."

First; *"with the 16 or 35 mm "optical master" having been created"*

It appears that here again, proponents of Z-film alteration believe that the creation of all the required steps to achieve special effects in theatrical motion picture are easily and equally applicable to 8mm film taken with amateur consumer quality cameras rendered in such a way as to replicate an original "in-camera" film without tell-tale image structure characteristics. Nothing is farther from the truth and the author's choice of the word "*created*" may well be significant.

The reader of this dissertation is cautioned to consider the complex characteristics of typical special effects cinematography.

Simply stated, to achieve special optical effects, it is necessary to begin with a "*family of film types*". Kodak designed camera original color films to work compatibly with laboratory intermediate films and print films as spectral dye "*sets*". □ Professional camera negative films were never viewed directly and their transmission spectrum matched the spectral sensitivity of intermediate (and print) films and the transmission dye set of the intermediate films matched the spectral sensitivity of the final

print films. The print films dye transmission had reasonable visual response with arc (or if printed properly) with tungsten projection.

In the case of the Zapruder film, the spectral sensitivity of a daylight camera original Kodachrome reversal film was balanced for about 5900 deg. Kelvin with nominally parallel curves having gammas of about 1.8. Because it was a reversal (i.e. it yielded a positive image) the spectral transmission characteristics of the dyes were designed for visual response when projected with 32-3400 deg Kelvin illumination. □ The film was not designed for printing response so that its dye set matched the spectral sensitivity of laboratory intermediate negative or positive films. A reversal duplicating film was available, but that was for direct simple copies, and not expected to be used as an intermediate. Further the film's daylight sensitivity; contrast and spectral characteristics do not render it receptive for use as a "print" medium - hence, one "hell-of-a" problem for someone trying to replicate a Kodachrome original (Note: *the goal now being to create a "Kodachrome original"*) by using special optical effects!

The goal *to create a "Kodachrome original"* provides further insurmountable challenges. Special optical effects for the cinema are designed to fulfill story telling support in scenes rendered in such a way that they are not obvious or disturbing to the audience. The author wishes us to believe that unknown persons with unknown advanced technology and film resources were able: *to create a "Kodachrome original"* that would be subject to undetectable microscopic examination and evaluation by multiple researchers. The "evidence" offered are scene content anomalies and an a priori technical capability and expertise.

The limited comments above do not even begin to address image structure constraints of grain; contrast and modulation transfer function losses. However another constraint requires comment and that is the requirement in optical effects of maintaining "cancellation" of film positioning variables due to: positioning/repositioning the film in the camera and optical bench projectors; processing shrinkage; relative humidity controls and heat control from projector light sources. Pilot pin registration is the typical method used and required for 35mm films. Sixteen-millimeter films also use "edge and point guiding" as a possible method for very limited effects. Either of the above requires a reference perforation(s) or edge and a perforation reference for adequate image positioning for the required masks.

With the Zapruder film you have neither. The reference edge (i.e. fixed rail side in the camera) is lost after slitting as the spring-loaded

guides are adjacent to the images being formed on the double-8 (16mm width film raw stock). Add to this the manufacturing (standardized) tolerances of: variation of slit width and perforation size and the required tight tolerances for optical special effects of scene content or as implied “alteration”, cannot be achieved.

A further complication in the equation derived by the author is that the final result is “printed” onto Kodachrome II daylight raw stock with the appropriate manufacturing marking and processing laboratory codes. Any commercial source of the film would not suffice, as it would contain: product code, date and strip number. I am not aware of the film source implied by the author – i.e. possibly involving a major film manufacturer in the implied conspiracy, or trying to derive an unmarked 8mm width slit (extracted) from within wide gage film – now requiring the perpetrators of alteration to have slitting and perforating equipment.

Other researchers have addressed the “time-line” and the fact that the “same-day” copies would have also required “matched alteration”. I’m exhausted envisioning the logistics of this purported set of “miracles”.

Further, the author also references “*sent out for processing (and to a Kodachrome plant, such as Hawkeye works)*”¹ I know of no Kodachrome processing available at Hawkeye (an equipment division). At Kodak, all processing was done through the unified film processing division. Kodachrome II required a complex multiple tank process. However, if processed at a Kodak lab other than Dallas, the “X” Lab’s ID and date would appear on the film – not Dallas! If the lab code printer were turned off, then another image reproduction issue is introduced into the equation. I am unsure if the author addresses this constraint or its purported solution.

Second: *“This point is crucial: in the case of the supposed camera original, there is not just “some image” in the sprocket hole area (the image doesn’t, just “bleed over” a little bit); rather, the image goes all the way to the left! To the left margin of the film!*

That this is so can clearly be seen even on the frames of the Zapruder film published in Volume 18 of the 26 volumes. But is that possible? Can the Zapruder lens do that? Can it put an image on the film that is full flush left?”

Under the correct circumstances of lens and light – **yes** the image can fill the area between the sprockets. See my test shots; Study 4, figure 4-28 and Study 3, Figure 3-12. The Red Truck was taken in Dallas

the same day in the same camera as the shots of Carol. Also in my report to the *Movie Machine Society & SMPTE* the upper right test targets, I show a test target with the image in the preceding and the following frame. To ensure this is available, I am emailing a couple of jpg images showing this inter-sprocket image characteristic with full penetration to the limit of the camera aperture cutout.

Note: Anthony Marsh effectively addressed this topic in his web article: (<http://www.boston.quik.com/amarsh/amateurs.htm>.)

Third: *“Then these pictures - these test shots - went into an appendix in the final report, which was delivered within hours of the ARRB going out of existence. □ A report that was supposed to “explain the anomalies.”*

□□□□□□□□ What Doug Horne noticed was that not in one instance - not a single one - could Rollie Zavada get the image to go full flush left.

□□□□□□□□ It couldn't be done, because the camera just isn't designed that way.”

I have no idea why a respected author needs to revert to hearsay to support his arguments. The tests referenced above are described on page 41 of study 4 – including the reason for the limitation of full inter-sprocket image penetration (we simply didn't have enough studio light available).

“A report that was supposed to “explain the anomalies.” The Appendix referred to, pages 50 through 55, do not contain photos. Rather, it contains selected and detailed microdensitometer traces of the inter-sprocket area of two cameras showing their comparable inter-sprocket image area capture characteristics and claw shadow. In that sense it provides a significant contribution *to “explain the anomalies.”* An Appendix is “part-and-parcel” of the report and the appropriate place to include analytical data of a scientific study.

Doug's comments about the inter-sprocket images surprise me. He was an extremely busy man near the time of the deadline for our report but always a great help. Obviously he did not see my multiple camera test results and apparently did not remember my conclusions about the inter-sprocket area. He apparently also forgot how the failure of the ARRB to exercise expected initiative with the DOJ caused months of delays and unnecessary rewriting (in the summer of '98) of the report format that was subsequently acceptable. Doug's role helped resolve the

problem so he should have remembered the reasons for the last minute “midnight oil”. However in retrospect: SO WHAT – the complete report was delivered ON TIME!

Finally: *“Let me now add that there is a small problem with Rollie Zavada which Doug experienced repeatedly. ¶Zavada is committed to the view that the Z film must be authentic. ¶This is not all that clear at first. ¶When I spoke to him in September 1998, he went out of his way to say that he had not tested for authenticity. ¶But that is not the way Rollie speaks anymore. ¶Now he talks as if he has accomplished something that, at the time, he was careful to say he had not done - he now behaves as if his multi-volume report somehow establishes the film as authentic.”*

In the work agreement with Kodak, the ARRB’s request to analyze image content of the “Z” film was not accepted and the ARRB expressly acknowledged that there would be no “statement of authenticity” required because of the “analysis of evidence” nature of the study.

Let’s put the Kodak report to the ARRB in proper perspective.
WHAT WE DID WAS: provide a knowledge and factual database. ¶Thus, using our report, the Archives, the DOJ, researchers and students can make their own authenticity determination. (i.e. we gave them “Tools” for authentication)

Our Program of Work was structured as studies to address the:

- Medium - vintage of the films
- Method - processing technology and markings
 - printing technology and characteristics
 - camera image capture characteristics

When combined, there is a high degree of assurance that the film identified by the archives as the *"Zapruder in-camera-original"* ---- is!!!

The Kodak study did not address - in writing – characteristics about the technical constraints or expected visual delectability of any possible alteration scenarios. The probability of alteration by applying laboratory optical effects or simple A-B printing techniques (to remove selected frames) after transfer of the original to an intermediate as proposed by some researchers was also reviewed. These topics were discussed and reviewed with NARA and Doug Horne of the ARRB while at NARA. ¶Further, my careful viewing of multiple scenes and my knowledge of optical effects technology convinced me (at that time) that a dissertation on the probability of alteration was not needed.

Note: subsequent to my report being filed with the ARRB I had another opportunity to further examine the “In-camera original” with the NARA subcommittee on preservation which further confirmed my beliefs.

When my contract with Kodak expired, I was in a position to express my personal views. Simply stated “There is no detectable evidence of manipulation or image alteration on the "*Zapruder in-camera-original*" and all supporting evidence precludes any forgery thereto.”

The film that exists at NARA was received from Time/Life, has all the characteristics of an original film per my report. □The film medium, manufacturing markings, processing identification, camera gate image characteristics, dye structure, full scale tonal range, support type, perforations and their quality, keeping shrinkage and fluting characteristics, feel, surface profile of the dye surface. □It has NO evidence of optical effects or matte work including granularity, edge effects or fringing, contrast buildup etc.

Rollie Zavada, 9/23/03