

Dated : 15th day of December 2011

My name is Iain McArthur I am a Specialist in Forensic Audio and Video Enhancement.

I hold an OND in Sound recording technology (Acoustics /electronics/studio techniques). I further trained with Intergraph Public Safety in Huntsville, Alabama (2003) in video enhancement techniques and I am now the European trainer of Intergraph video enhancement software in Europe. This is Video Analysis software and has been used on the Space Shuttle disaster and on all US Government analysis of Osama Bin Laden video footage.

I have worked in the Research & Development Department of renowned Pro-Audio manufacturer AMS -Neve, developing audio mixing desk technology for the film industry. I was Lead Software Test Engineer on their flagship product the DFC Digital Film Console (Over 70% of the world's blockbuster films are mixed on D.F.C.) and my responsibilities were in Software Development and Testing, Training and Customer Support. In 1999 whilst working there, the company /R&D Dept. was awarded a SCIENTIFIC AND TECHNICAL AWARD (Oscar) by the Academy of Motion Picture Arts and Sciences for the Digital Film Console. I have 16 Years experience working as an Independent Forensic Audio / Video Enhancement and Transcription Specialist for many UK Police agencies and hold the contract for all forensic audio and video work for the Royal Military Police. I am a registered expert advisor with the Police National Crime Faculty (NPFA) database. I have undertaken work on high profile jobs such as the Levi Bellfield trial(s), the death of the BBC journalist Terry Lloyd in Iraq, the News of the World sting operation on world snooker champion John Higgins and the Daily Mirror's Iraqi fake photograph story and worked on numerous murder enquiries throughout the UK, Ireland and the middle east.

Firstly I would like to explain the equipment and methodology of my analysis:

The processes used in the analysis were as follows:

The image was received by email. The image was opened in imaging software and magnified to search for details that would later be commented on.

The final visual imagery with some added overlays was then sent back via email.

Christian,

The following are my comments on elements of the image that I felt should be analysed:

Regarding Analysis 001.jpg: The Record button (in red) has been added afterwards. If the still was taken from previously recorded footage then there would be no record indication on the screen. The still would likely be lifted on playback and therefore I believe this feature has been added purely for visual effect as you would to dramatise a documentary or indicate something may have been recorded covertly.



Regarding Analysis 002a&002b.jpg: In this image I have added red squares around both (what I believe to be) paintings/pictures that have been crudely masked out using a digital paint programme (same as the women's faces have been masked out). A possibility is that the paintings/pictures have been masked to disguise them from aiding the recognition of the room where they were hung.



Regarding Analysis 003.jpg: A white center cross (+) has been added post recording. This differs in that it is a better resolution than the background video image. The white corner framing elements have also been added. I believe this is also as Analysis 001.jpg where the intention is to portray a covert recording for dramatic purposes. Also there has obviously been some post recording contrast management (spotlighting) to highlight the man on the right of the image.



Regarding Analysis 004.jpg: A feature that seemed unusual was the aspect ratio (Height and width of the image) appears different to the normal video camera aspect ratio which leads me to believe it may have been cropped or put through a digital video effects generator.



Regarding Analysis 005.jpg: There appears to be a rectangular area of interest around the man's head which I will refer to as an area of manipulation. It could possibly be contrast management added to increase the perception of the man's face but equally it could be an indicator of facial replacement. It also appears that the face itself is brighter than the rest of the head.



Regarding Analysis 006a & 006b.jpg: The strongest light source on the man is from the left to the right. This is evident as the shadow is on the side of his face closest to the right of the image (from the viewer's perspective). The strongest light source on the woman sitting on the centre of the picture is from the right to the left (from the viewer's perspective) as can be seen with the very light areas on her thigh. The fact that there is different lighting on the man as opposed to the woman may be a sign of facial replacement or it may simply be that there is a strong lamp/light source to her right as opposed to the man who may be most prominently lit from the window to the left (from the viewer's perspective).



Conclusion:

This image has been manipulated. My conclusion is that the only way to prove the accuracy or truthfulness of this image is to see or analyse the original (or copy of) video tape. I feel it would be unsafe and remit of you to publish these as real without these caveats due to the obvious manipulation and the strong possibility that it may be a composite.