Chapter 10
The Prime Illusion

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ABSTRACT
This final chapter focuses on the potential of three-dimensional imaging. In particular the medium’s ability to record three-dimensional objects, as with the holograms made of John Harrison’s famous fourth timekeeper “H4” for the Royal Observatory, National Maritime Museum in Greenwich, London, and the strange case of Professor Günter von Hagen and his “BODY WORLDS: The Anatomical Exhibition of Real Human Bodies,” who seriously explored its potential but relinquished its further exploration due to negative public opinion of his exhibitions at that time. Holographic stereograms are also discussed, in particular their ability to capture animation, as detailed in Case Study Three: Holograms of David Bowie. The text also explores some future applications of wavefront reconstruction.

CASE STUDY ONE: STOPPING TIME
On the evening of 13th March 2008, between the hours of 6:00pm and 2:00am, five reflection holograms were recorded of John Harrison’s fourth timekeeper ‘H4’, at the Royal Observatory, National Maritime Museum in Greenwich, London. Arguably the most important timekeeper ever made, this watch finally solved one of the greatest scientific problems of its time, that of finding Longitude, and marked the beginning of accurate global positioning. In recent years public awareness of the watch has reached an unprecedented level, together with a string of authoritative writings including the release of Dava Sobels book, ‘Longitude’, with introduction by NASA astronaut Neil Armstrong, a filmed drama adaptation and even a television sitcom ‘Only Fools and Horses’ where viewing figures
reached a record twenty-four million (Sobel 1996). The watch, its history and its place in history, remain a subject of fascination and curiosity. Now its journey to hologram is traced in this paper through the events of that March evening.

The Time of Day

I’m walking to Greenwich through Blackheath, South London, mass burial graveyard of the unfortunate victims of The 1665 Great Plague which ravaged England from June until November of that year, reaching its peak in September when in one week 12,000 people in London died, from a population of around 500,000 and it was decided that Parliamentary administration should be conducted from Greenwich in order to escape the effects of disease in central London. All this some thirty years before John Harrison’s birth, but setting the scene for what was to be center stage for, quite literally, the time of day. I’m on my way to the Greenwich Royal Observatory home of the Harrison Timekeepers to join my friend and fellow holographer, Jeff Blyth, who suggested one winter evening during a meeting of The Royal Photographic Society Holography Group, that a hologram of Harrison’s fourth timekeeper ‘H4’ would be a notable achievement. When it was created, ‘H4’ represented state-of-the-art, ‘leading edge’ technology in a highly important scientific and technological field. Our hologram is also ‘state of the art’ and echoes the work we are doing in a parallel field. Particularly with vulnerable objects, showing holograms instead of the originals could prove to be an important innovation in the conservation world. The timekeepers are rarely out of sight from its secure display case, making this crazy impossible idea all the more reasonable.

A few days before my visit I’d arranged to meet Mr. Jonathan Betts, Senior Specialist in Horology at the National Maritime Museum to put forward our proposal. It was an idea that he greeted with enthusiasm, for he is constantly looking for new and exciting ways to interpret and reveal collections for visitors, and these holograms appear to be the ‘next big thing’, with very interesting possibilities for exceptionally valuable or vulnerable objects such as ‘H4’. Betts is a global authority on the timekeeper, having penned a number of works on the subject. He was the authoritative historical advisor to the British Broadcasting Corporation (BBC) for an episode of the television comedy ‘Only Fools and Horses’. Screened on the 9th December 1996, it attracted a massive television viewing audience of 24.3 million, a record for a British sitcom. The plot follows these lines: After finding the missing Harrison timekeeper, Del Boy played by actor David Jason, offers it for examination by experts at Sotheby’s and all accept it to be the Harrison “lesser watch”, a semi-mythical piece whose designs exist although it is unclear whether the watch was ever made. Spivey Del Boy is rewarded for his find to the tune of £6,500,000 at auction, elevating him from his council flat in Peckham, into grand oblivion far beyond our TV screens. It was the last ‘Only Fools & Horses’ show ever made, leaving the public with a memorable and plausible happy ending.

A Problem Solved

Mr. Betts explained the importance of the timekeeper and described how “Every 15° that one travels eastward, the local time moves one hour ahead. Similarly, traveling West the local time moves back one hour for every 15° of longitude, therefore, if we know the