Tapescript

Narrator: At the time of the Roman Empire in Europe, around 2,000 years ago, it was common for information to be written, not on paper, but on things called 'tablets'. These were pieces of wood about the size and thickness of a typical modern envelope **[7]**.

Hundreds of such tablets have been unearthed from archaeological sites throughout Europe and the Mediterranean world – nearly 200 were found in one Roman fort alone **[8]** – and like most of these discoveries, they have been placed in public collections, mainly in museums in northern Europe, to be viewed but not, unfortunately, to be read.

This is because, although in some cases traces of writing can still be seen, most are now illegible to the naked eye. But that's all soon to change because archaeologists hope that with the help of new technology, their secrets may soon be revealed. Many of the tablets took the form of legal documents and letters written by Roman soldiers **[9]**. An example, now at the British Museum, bears the name of the person who wrote it and the name of the person who received it, plus the word 'transportation' **[10]**, which you can just make out, but the rest remains a mystery. Now, with the help of computer techniques, experts hope eventually to be able to read the whole letter.

Professor Mike Brady, a leading figure in *what's known as 'computer vision'* for many years, admits that this is the hardest project he's ever worked on **[11]**. But the excitement of seeing the latest ideas in computing applied to such a very ancient problem has the archaeological community buzzing.

So, in simple terms, why has the writing been preserved and how will it be possible to 'undo' the ageing process? Well, the tablets were made with thin, hollow panels cut across them. Wax was poured into these **[12]** and the text was then written into this soft surface using an instrument with a fine metal point. In virtually all cases, the wax has perished and all that can be detected on the surface of the tablet underneath are scratches. These are too faint to be read, because they are distorted.

For some time, scientists have attempted to study them with laser photography, but this has *proved fruitless* **[13]**. However, it is now hoped that by enhancing images of the tablets on computer, their original messages will become legible again. If this is the case, a whole new source of historical information will be opened up, and this promises advances and new knowledge for many decades to come. The new technology has already been used on texts in ink as well **[14]**, and in the future, it will be applied to damaged surfaces of many kinds.