LEO Film Specification

Working title:

Tea, cake and LEO – the extraordinary story of the world's first business computer

Overview

Overall brief: to work with the LEO Computers Society (LCS) and the Centre for Computing History (CCH) to develop and deliver a documentary film on LEO Computers and the birth of business computing, suitable for a range of audiences. Although there are many films about computers and their development, they often omit LEO for a whole host of reasons, and this film will put the record right.

This is part of a National Lottery Heritage-funded project called *Swiss Rolls, Tea & the Electronic Office: a history of the LEO, the world's first business computer* created to preserve, protect and promote the story of LEO, the world's first business computer.

Objectives

Primary Objective:

To publicise the little-known fact that it was a British catering company (J Lyons & Co) that built the world's first computer used for business purposes, LEO (Lyons Electronic Office), which started work in 1951.

Secondary Objective:

To tell the story that this is how and why computerisation in the office started: LEO was built in answer to Lyons' post-war question – could they harness new electronic technology to streamline their office procedures to maximise efficiency and profitability?

The answer was yes, but there was nothing there to be bought off the shelf in the late 1940s– so they made it themselves and started a revolution in the process. The outcome of that revolution remains visible today.

Target Audience

General public from secondary school age upwards, with no assumed prior knowledge of computers or computing history.

Tone

Narrator, rather than presenter. Young voice preferable.
Graphics/animations for anything technical
Informative, educational, light touch.

Length
15 minutes.

Distribution/Publicity
The film will be used for educational purposes in schools/colleges and seen for general interest via YouTube. At time of writing, the LCS has 45 YouTube subscribers and CCH has ~16,000.

CCH will promote the film to all schools/colleges who visit as part of their learning programme and could make it/parts of it viewable within the museum. With appropriate credit, other museums may do this too.

We will embed in LCS and CCH websites (likely via YouTube).

The 70th anniversary of LEO in Nov 2021 is a good vehicle for publicity.

Accessibility
Subtitles are required as a minimum. Audio description and a separate transcript are desirable.

Schedule
Preferred start date: on or near 26th October 2020
Delivery of completed film is required by: 15th October 2021
Regular progress meetings are expected (preferred monthly but negotiable, may be held online).

Budget
£15,000 + VAT. Payment schedule to be agreed (please specify in your tender document if you require a specific schedule of payments).

A short final report will be required summarising the work of producing the film. This will be used in order to evaluate progress on the wider project and may be made available to the funders. Payment of the final invoice (for a minimum of 10% of the total budget) is conditional upon receipt of the final report.

Tender Process

1. Briefs for the work are available on our websites from 11th September 2020, requesting full quotations and a proposed timetable of work to be supplied by interested parties by email to the Project Manager, Lisa McGerty (lisa@computinghistory.org.uk) by 5pm on 9th October 2020.
2. We will also promote the briefs on social media, directing interested parties to the websites for further information.
3. We will contact known potential suppliers with the briefs and invite them to quote, as per 1 above.
4. If elements of the quotations need explaining, we will arrange online meetings/telephone calls to discuss.

5. The project Steering Group will discuss the quotations and a supplier will be chosen, taking into account value for money (60% weighting) but also other factors such as proposed timetables (20%) and the perceived fit between the supplier and the project team (20%). In the unlikely event that the Steering Group are unable to agree, the Project Manager's decision will be final.
6. The result of the tendering process will be made known by email to interested parties by 19th October 2020, subject to contract.

Things to include in the film - Must Haves/Could Haves/Possibles

The film must include (must haves)

- **LEO was the world's first business computer, starting work in 1951 – 70 years ago in 2021.** (See timeline supplementary document)
- Lyons were among the first businesses to see the benefits of computers – and they had no background in electronics at all.
- What else was going on at the time? What was post-war Britain like?
- Some background on J Lyons & Co; the company was huge and very well-known in post-war Britain, particularly for its chain of teashops, its tea, cakes and ice cream.
- Something on the pioneers to be woven throughout the story or as short, snappy interview segments.
- What was LEO I like? Showing what the pioneers managed to create and drawing parallels with today's machines. (Comparisons to today's speeds, memory size, quantity of data etc. could be very interesting to young people who take big data for granted. What was it like to work on such a machine? Round the clock operation. How they dealt with faults etc.) Sneak some technical concepts in through good, practical stories and/or graphics/timeline. LEO I was vast - compare it something people know-maybe a sports pitch or similar?
- LEO's versatility and the demand for its services beyond Lyons – it became used as a bureau, then Lyons decided to make computers for sale (LEO Computers Ltd set up Nov. 1954).
    - maybe a montage of household names e.g. Fords, Post Office, Dunlop, Imperial Tobacco etc;
    - exports to Australia, South Africa, Czechoslovakia (behind the 'Iron Curtain');
    - varied applications beyond office ones e.g. Met Office, PAYE tables 1955-6 (done in one night), Ordnance Board, Handley Page (aircraft design), Appwood (market research), Coal Board (pneumoconiosis research), British Transport (rail distances), De Havilland (Blue Streak);
- The story is useful as a case study for user-driven innovation. How different might our world be now if the original vision of the pioneers – the importance of the end user's needs – had been prioritised since? Unlike many other manufacturers, the user was the starting point rather than the product. The pioneers' central idea that the needs of the end-user were paramount meant that the computer was always fit for purpose.

- Long after the LEO brand ceased to be made, its legacy has lived on – to the present day. LEO proved from early on that the power of computers could be harnessed for routine business tasks – something we take for granted now. Many of the ideas used in the 1950s are still used today – for example, the teashops delivery program ensured that vans were loaded in order of delivery – a principle much in use in today's logistics.
- The people who worked on LEO used their technical expertise, work ethos and creativity to make a hugely significant contribution to the development of business computing with major roles in academia, as leaders in the computer industry both in the UK and abroad and as experts in the wider world of computing.
- The LEO Computers Society, a registered charity, serves as a focal point for those who worked on LEO computers who have retained a pride and warmth of feeling about their work. The Society has members around the world and links with museums, archives and universities. The Society aims to promote the history of LEO and to make the story as well known as it believes it should be. It is delighted to be working in partnership with CCH on this project.
- It is essential to credit the National Lottery Heritage Fund (NLHF).

The film could include (could haves):

- Like many companies, Lyons needed to record large amounts of data. How did they deal with the data before LEO? Interesting to show previous methods – how much drudgery involved, looks very primitive now.
- Lyons sent senior people to the US as soon as it was possible after the war to look at what was available there - but it was at Cambridge University that a potential machine was being built (EDSAC). Lyons helped fund the work on condition they could create one themselves if it worked.
- How have things changed? How LEO relates to present day, what lessons does it teach us? (Possibly some footage of an Amazon type warehouse and vans now – demonstrating how modern logistics and 'big data' as a concept derive directly from LEO's early innovations. Lyons were doing this 70 years ago and could do so because they built a computer, albeit one that filled a large room and had just 2K of memory).
- LEO firsts (or at least earlies) e.g. stock exchange, document reader, peripherals (input/output), timesharing, banking (BARIC).

If we have time and it won't detract from the overall message, we could possibly include:

- Because they were meticulous record-keepers, we can step into their shoes and understand what Lyons were doing and what they wanted to achieve with an automatic calculator. This lets us weave the archive/the wider LEO project in.
- LEO was not just another EDSAC but involved a considerable number of changes to the Cambridge machine (we're setting the record straight on this).
- Lyons invented Information Systems as a discipline.
- Could children/students contribute to making the film in some way?