

# What can we learn from a catastrophic business error?

Matthew Brett

# FUMBLING THE FUTURE

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**HOW XEROX INVENTED,  
THEN IGNORED,  
THE FIRST PERSONAL  
COMPUTER**

Douglas K. Smith and Robert C. Alexander

## Xerox 1970

- 1959: Xerox 914 copier — “the most successful single product of all time”.
- 1970: [Xerox Palo Alto Research Center \(PARC\)](#)

**George Pake**



## **Bob Taylor**



## **The team**

Many, including four who went on to win Turing awards:

- [Butler Lampson](#)
- [Alan Kay](#)
- [Charles P. Thacker](#)
- [Robert Metcalfe](#)

## **The vision**

The office of the future  
... cheap, powerful personal computers ...

## **(Some of) what they built**

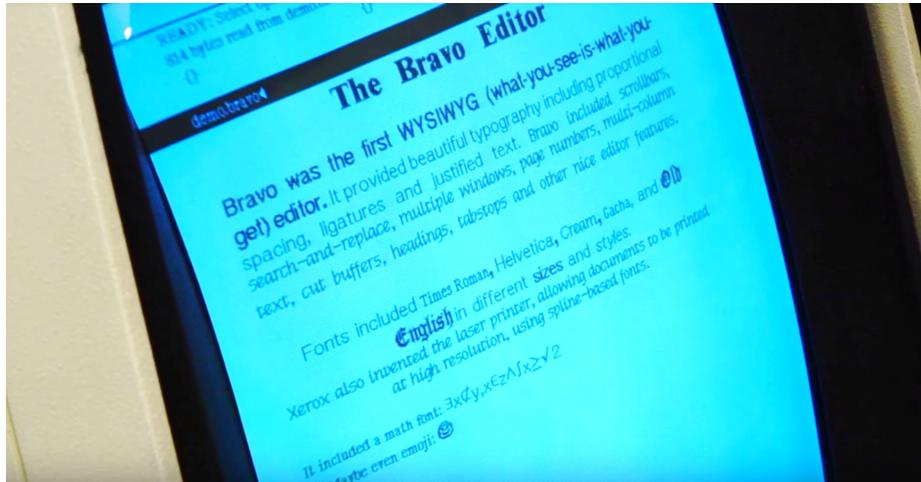
- Desktop, windows icons Graphical User Interface
- Modern word processing
- Ethernet
- Laser printing
- With major contributions to:

- Programming languages (e.g. Smalltalk)
- Computer graphics
- ...

## Modern user interface



## Modern word processing



## Snatching defeat from the jaws of victory

- The demos - only the people doing the work saw the value.
- Competing with Ford business model optimizing for value.

## Until near finally

- 1979: [A visit from Apple](#)
- 1983: Apple Lisa
- 1984: Apple Macintosh.

## Management unto death

- 1983: George Pake tires of Bob Taylor, hires William J. Spencer as PARC director.
- Spencer: "[Taylor's not going to leave. He doesn't have anywhere to go.](#)"

"Bob, it is my desire that as a result of our discussions that you will make the necessary corrections in your behavior and actions to be a valued member of my staff. However, it is important for you to understand that any failure to comply with these action items, or the confidentiality of this memo, with result in disciplinary action that may include your termination".

- Taylor leaves a few days later, team disbands.
- 1986: Pake awarded [Industrial Research Institute Medal](#)

## Themes

- Success tends to stasis.
- Listen carefully to the right people.
- Hedging bets on innovation leads to failure.

See: Smith and Alexander (1999), Hiltzik (1999)

## The end

Materials at <https://github.com/matthew-brett/lis-talks>.

## References

- Hiltzik, Michael A. 1999. *Dealers of Lightning: Xerox PARC and the Dawn of the Computer Age*. HarperCollins Publishers.
- Smith, Douglas K, and Robert C Alexander. 1999. *Fumbling the Future: How Xerox Invented, Then Ignored, the First Personal Computer*. iUniverse.