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Field Data Recording Technologies

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- Specializing in mobile computing and field data collection applications for 27 years
- Elecdata offers a variety of hardware & software solutions complete with technical support, training and repair services.
- Home Office in Jerome, Idaho
- 21 Employees with six sales field offices in the Western U. S. providing regional coverage

--Liberty, UT
--Idaho Falls, ID
--Missoula, MT
--Portland, OR
--Olympia, WA
--Sacramento, CA

The Good Old Days?

Early Electronic Scaling Machines

- **Proprietary 8bit OS**
  - Heavy – Some Large
  - Small screen,
  - Non-ergonomic
  - Difficult data transfer
  - Programed in Assembly – Machine code …

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Disk Operating System

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➢Then Came DOS!

- **Finally a cross platform 16bit OS**
- **Larger screens.**
- **The BIOS handled the platform differences.**
- **Fully programmable in C/C++.**

Life is good now that high production data collection is becoming a reality.

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Windows CE

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- **Windows CE is a big turning point.**
  - Off to the races to who knows where, Microsoft says “Follow Me”.
- **Initial Gains from the DOS OS**
  - 32bit OS with a Windows style GUI interface.
  - No more BIOS, processor dependent.
  - The 640 kb max program size barrier is now broken.
  - Data transfer now easier with ActiveSync and USB.
  - WIFI and Bluetooth becoming available.

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Windows CE

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- **Windows CE is a big turning point.**
  - **Initial Losses from DOS OS**
    - **Data storage (object store) defaults to RAM**
    - **Limited development tools**
    - **No more Console/Terminal Fonts so harder to read**
      - » **These characters** “0 O l 1 I i ”
      - » **Now appear like this** “0 O l 1 I i”

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Windows CE

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- **Windows CE is a big turning point.**
  - **Windows CE Splits into Two user interface categories.**
    - » **HPC interface – Still High Production Data Collection**
      - **Desktop, Menu, and Taskbar are like a PC**
      - **Mostly Landscape Displays**
      - **Hardware Keyboard interface (Mostly).**
      - **Well behaved and intuitive to the user.**
      - **Microsoft would not include Office products with it**
      - **Allegro CE, Ranger, Etc.**

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Windows CE

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- **Windows CE Splits**
  - » **Pocket PC – High Production Data Collection No Longer a Reality But Still Has Uses**
    - Desktop becomes Today Screen
    - Menu and Taskbar swap locations
    - Mostly Portrait Displays
    - Hardware Keyboard replaced by Touchscreen Keyboard
      - Some units kept the Hardware Keyboard.
    - Designed as a Personal Data Assistant (PDA)
    - The new Pocket PC shell tries to overlay programs
    - Most programs just move to the back when the [x] is pressed
    - Microsoft DOES include Office products with it
    - IPAQ, AXIUM, Etc.
    - Etc., Etc., Etc.

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Windows CE

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- **In 2003 Microsoft Dubbed the Pocket PC "Windows Mobile".**
  - **Now CE version is 4.21 up from PPC CE 2003.**
- **Went straight to Windows Mobile 5 (WM5).**
  - **WM5.0 Is now CE version 5.1.x**
  - **Data storage (object store) defaults to Non-Volatile Flash.**
  - **Microsoft decided it was the Hand Held OS of choice.**
  - **It started to become more like a phone.**
  - **Minor Split to a "Standard" and "Professional" version.**
  - **Function Keys were stolen by the OS for volume adjustment etc.**
  - **WM6.1 became CE version 5.2 with Build Numbers < 20000 (19281.1.1.1)**

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Windows CE

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- **Windows Mobile 6.5.3 Appears**
  - **New user interface**
  - **Task bar, Ok button, and Start button moves back to bottom**
  - **Became CE version 5.2 with Build Numbers > 20000 (29058.3.12.8)**
  - **Becomes more like a phone.**
    - **Program selection with Icons instead of a list.**
    - **Settings part of the program page.**
    - **Started using touch screen gestures (swipes) instead of scroll bars etc.**
  - **Now we are back to the future, Embedded CE.**

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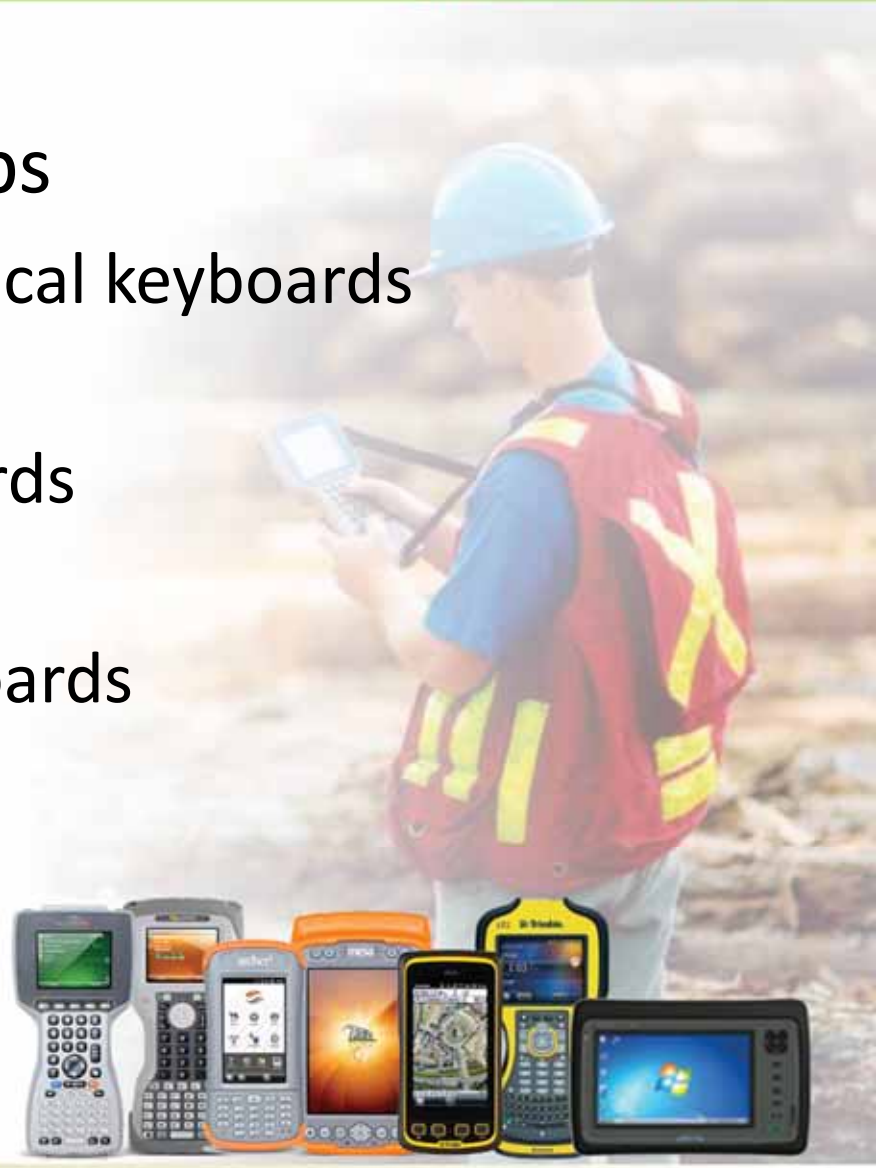
We now have 3 main groups

- Hand Helds with mechanical keyboards
  - High Production
- PDAs with popup keyboards
  - Low Production
- Tablets with popup keyboards
  - Medium Production.



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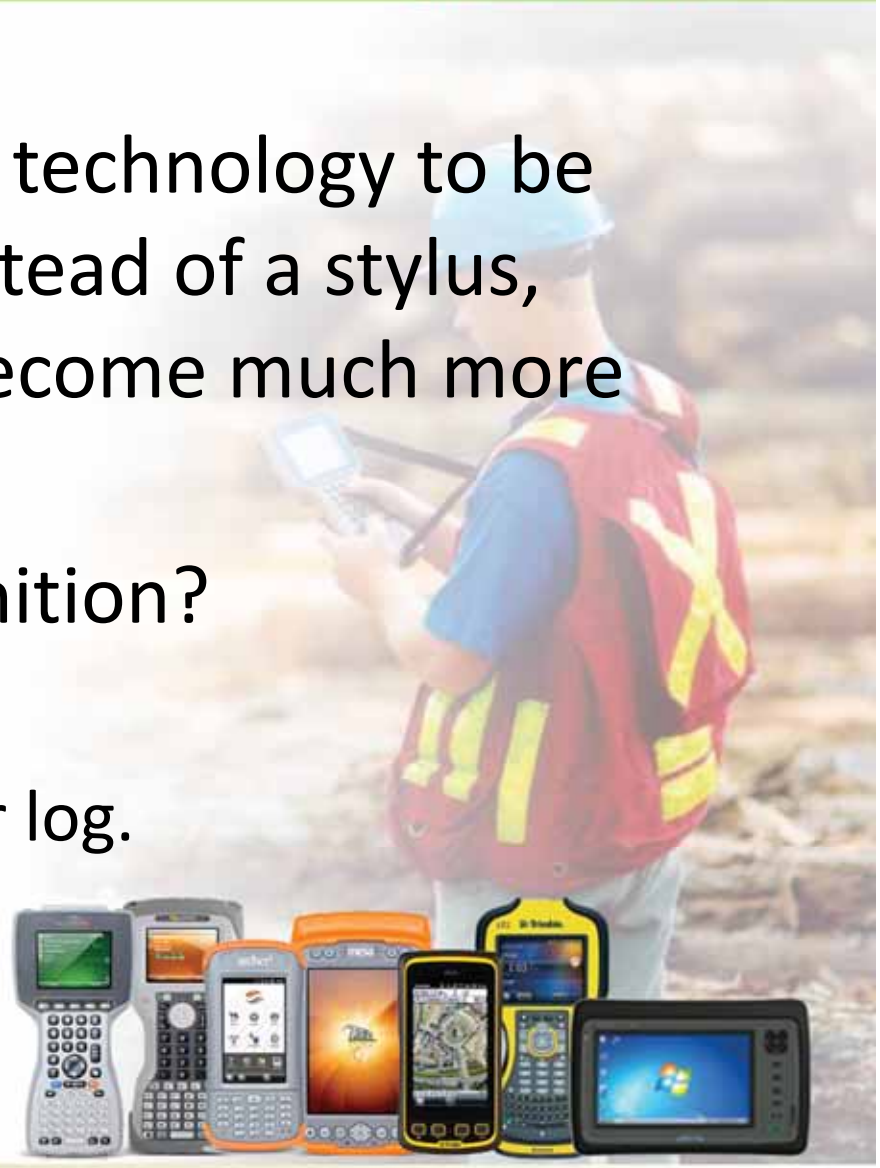
- As touch screens change technology to be used with your finger instead of a stylus, mechanical keyboards become much more important.
- What about voice recognition?
  - Currently not practical.
  - Can be over ½ minute per log.



Questions?

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