BoF: Automated Testing and Board Farming

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About Me

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🐦 SmithChart
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Board farming

- Automated control of devices
- Working from remote and board sharing
- Automated execution of $STUFF
<table>
<thead>
<tr>
<th>Board farming</th>
<th>Automated Testing</th>
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<tbody>
<tr>
<td>• Automated control of devices</td>
<td>• Run tests (interactive)</td>
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<tr>
<td>• Working from remote and board sharing</td>
<td>• Continuous testing</td>
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<tr>
<td>• Automated execution of $STUFF</td>
<td>• Testing software on real (or emulated) hardware</td>
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<td>• Custom test suites for specific device / software</td>
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<td>• Generic test suites</td>
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BoF

Add your topics here:

Link is also in the abstract for this talk at
https://osseu2022.sched.com

https://docs.google.com/document/d/1oxgzOvWu6vbC4SoJq6y-NbqhlNnEED73ZeCp7hpSU7QU/edit#
Discussion
Board Farming at Pengutronix (1/2)

- > 100 different devices under test
- Primary lab consists of 19” server racks
What’s new in our lab?

- No more GPIOs on a OneWire-Bus
  - Now: CAN-based: GPIOs
- Multiplexing of USB-Devices
  - Popular!
  - Problem: Hardware availability
- Use one test-server per DUT
  - Prototypes available, still working on EMC
What’s missing?

- Graphics stack development:
  - Camera, Board, Display must be on their desks
  - No way to test video input/output
- x86: Keyboard/Mouse input + Video capture
  - No KVM-solution integrated into labgrid
  - OK for development
  - No way to test Keyboard/Mouse or video output
Backup Topics

- What lab automation do you use?
- What is the most unusual interface you support?
- What does it look like in your company: Does every department have its own board farming system?