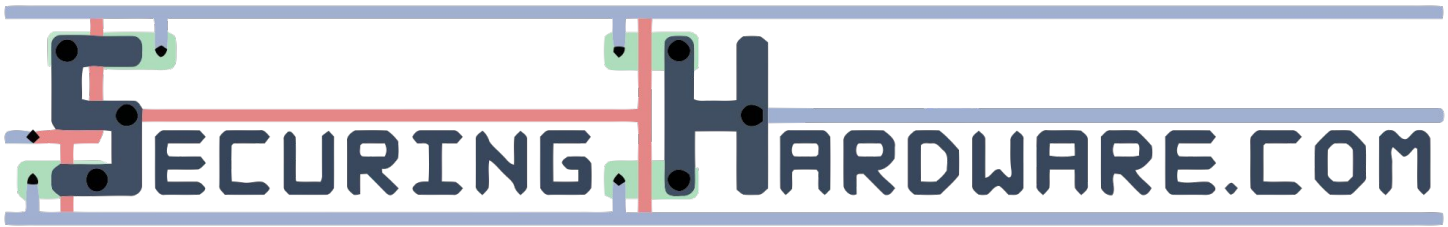
Custom, cheap, easy, and safe badges…

WITHOUTH

starting from scratch!



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Lead Trainer: Joe FitzPatrick

- Electrical Engineer by education
- 10+ years of fun with hardware
  - silicon debug
  - security research
  - pen testing of CPUs
  - security training
- Applied Physical Attacks Training:
  - X86 Systems
  - Embedded Systems
  - Hardware Pentesting
- Own white shoes full of LEDs



Joe FitzPatrick
@securelyfitz
joefitz@securinghardware.com

SECURING HARDWARE.COM

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- **What/Why have badges?**
- What and why OpenTaxus?
- What’s the vision?
- What can we do today?
- Badge logistics
- Common pitfalls

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What/Why have badges?

Access



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What/Why have badges?

Cool factor



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What/Why have badges?

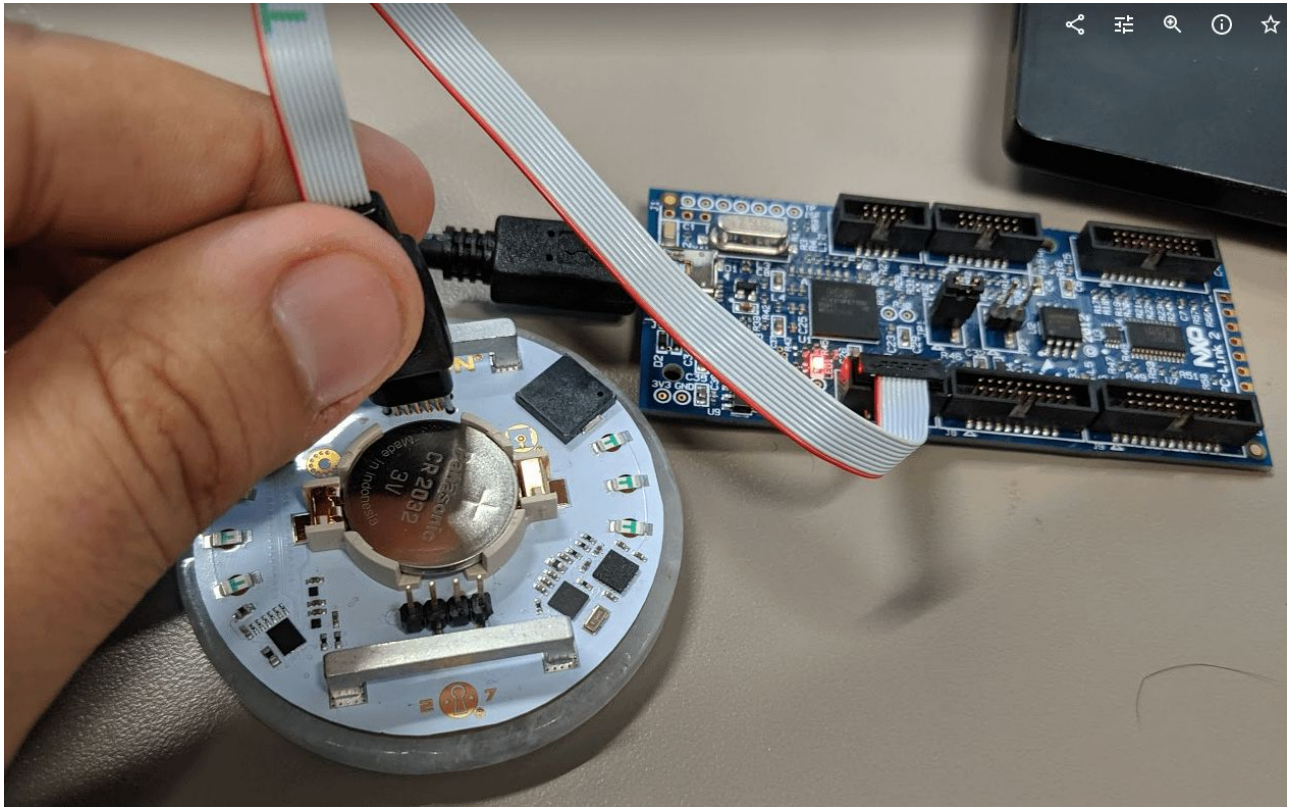
Attendee interaction



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What/Why have badges?

Learning



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What and why OpenTaxus?

American badger

52 languages

Article Talk Read Edit View history Tools

From Wikipedia, the free encyclopedia

The **American badger** (***Taxidea taxus***)[n 1] is a North American badger similar in appearance to the European badger, although not closely related. It is found in the western, central, and northeastern United States, northern Mexico, and south-central Canada to certain areas of southwestern British Columbia.

American badger



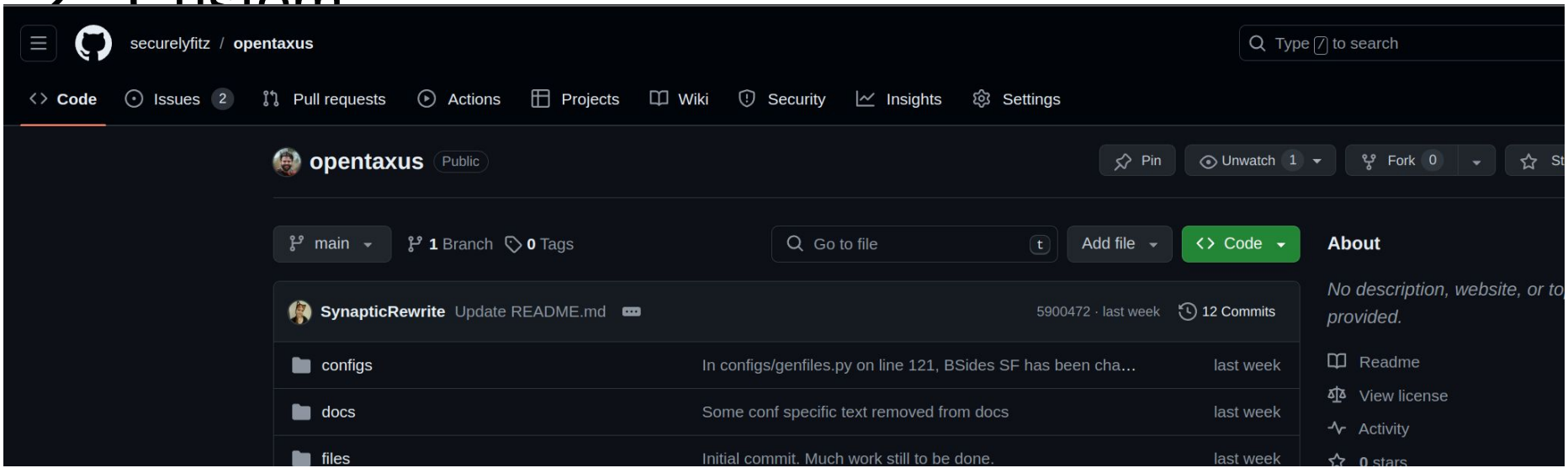
In Point Reyes National Seashore, California

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What and why OpenTaxus?

1. **Open**
2. Custom

https://github.com/securelyfitz/opentaxus

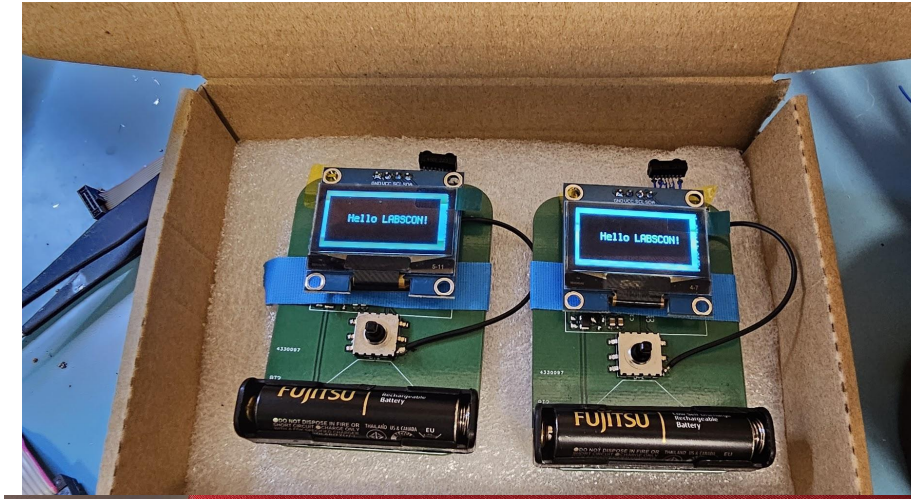


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What and why OpenTaxus?

1. Open
2. **Custom**
3. Cheap
4. Easy
5. Safe







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What and why OpenTaxus?

1. Open
2. Custom
3. Cheap
4. Easy
5. Safe

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QUOTATION

Date: 2024/2/29
No.: 2024-0229-NewQ

To: Hardware Security Resources, LLC
From: King Credie Technology Limited

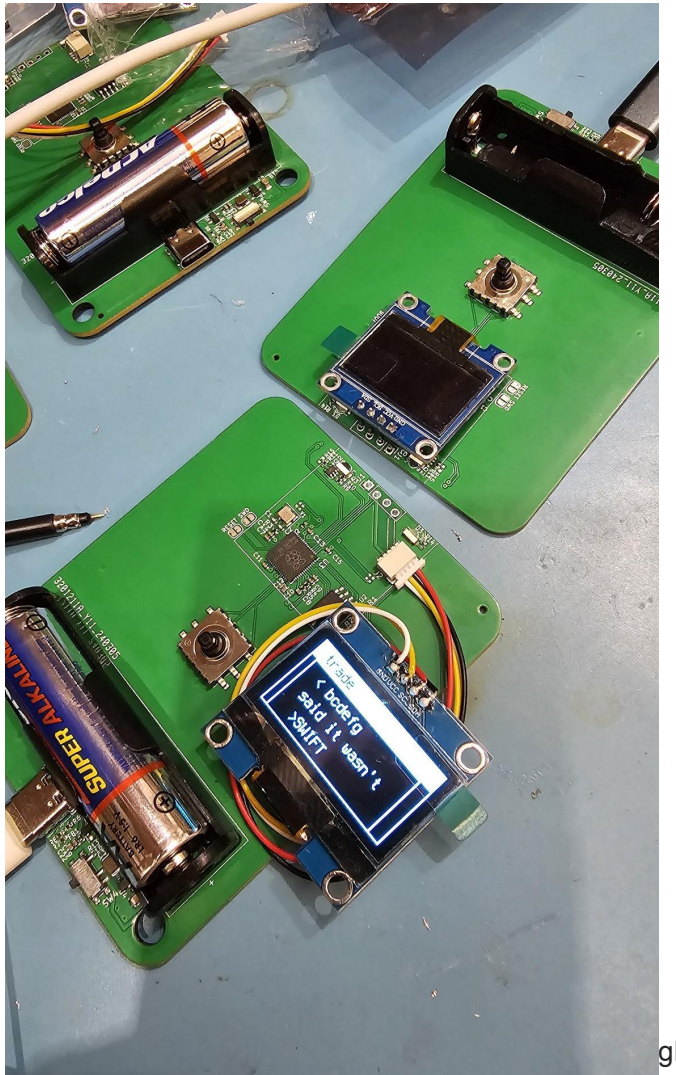
Payment Term: T/T in advance
Delivery Term: EXW & FR

Qty	Unit	Description				Unit Price
1250	Panel	labsconbadge-23				1.200
1	Lot	Tooling cost				60.000
1	Lot	Fixture cost				120.000
1	Lot	SMT+Component cost				5.70
1	Lot	Freight cost (via DHL) to USA				1000.00
10.838	㎡ Order Area		Lead-time	**4**	Weeks	Total Amount **(USD)**

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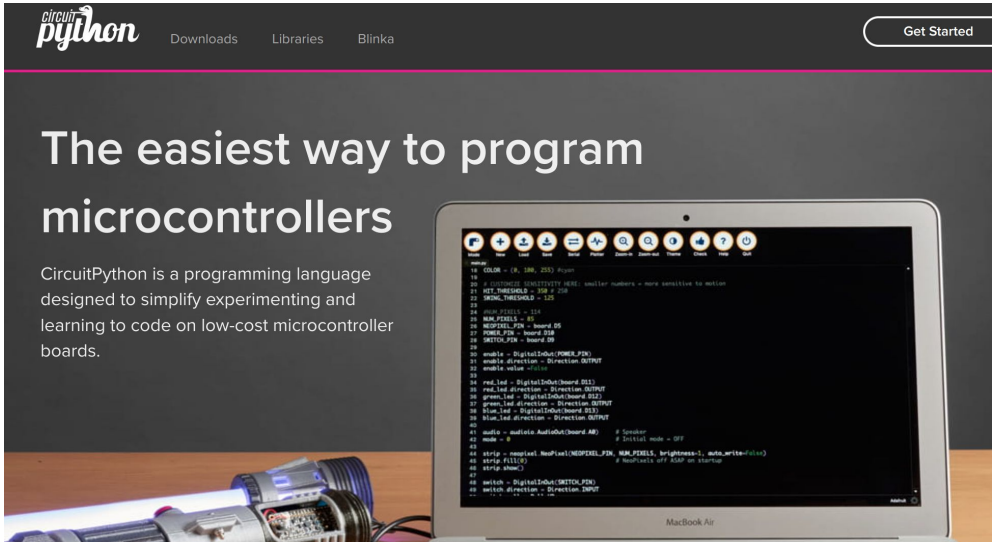
What and why OpenTaxus?

Encouraging interaction:



What and why OpenTaxus?

Encouraging Learning:



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What’s the vision?

1. Go to a website
2. Type in your conference name
3. Upload your logo
4. Click ‘go’, and receive board files, BOM, code, etc.

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What can we do today?

Hardware:

- Change the logo in kicad
- Adjust the board footprint
- Rearrange the layout
- Hack it to pieces

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What can we do today?

Software:

- Change a few strings in CircuitPython
- Change all the game text in CircuitPython
- Implement a new game from scratch?

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Badge logistics

- Hand assembly?
- Small batch assembly
- Contract manufacturing
- Flashing?

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Common pitfalls

SCHEDULE

also:

Functionality

Support

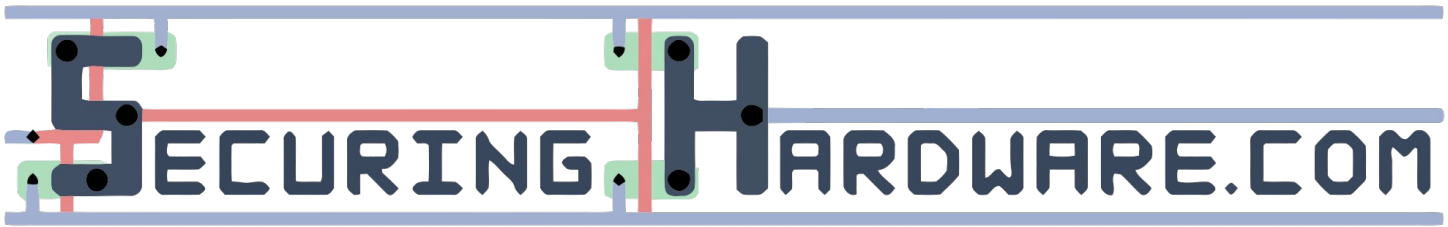
etc…

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