



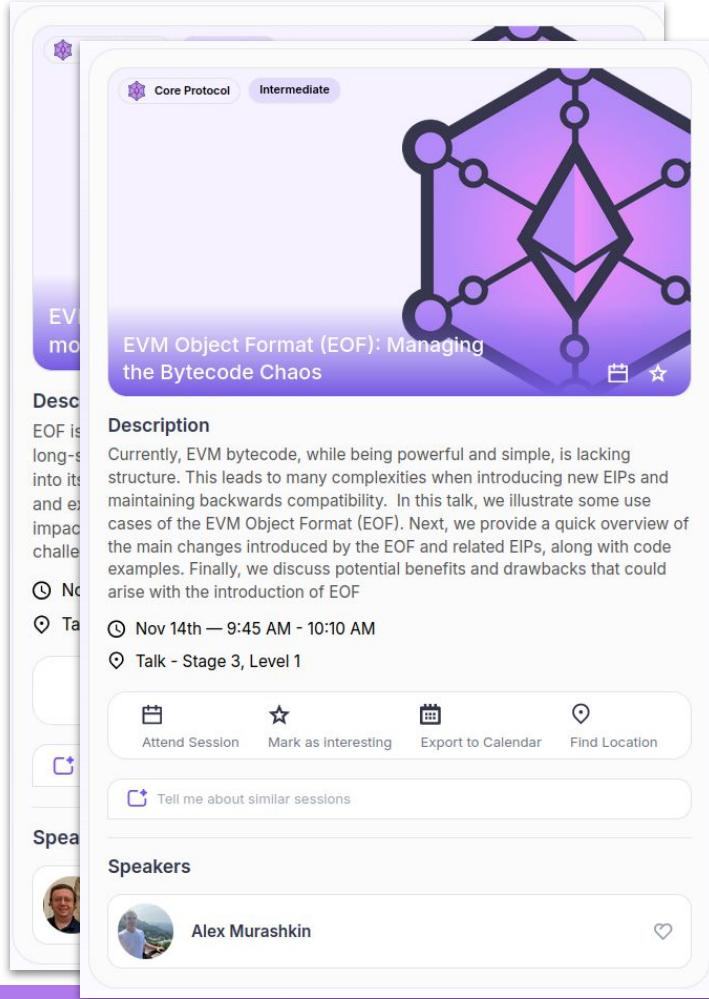
 CHAINSECURITY

Emilie
Making sure EOF is done right

[Hubert Ritzdorf](#)



What is EOF?



The screenshot shows a session card for a talk titled "EVM Object Format (EOF): Managing the Bytecode Chaos" by Alex Murashkin. The card includes a purple hexagonal graphic, the title, a description, and speaker information. It also features buttons for attending the session, marking it as interesting, exporting to calendar, and finding location, along with a "Tell me about similar sessions" link and a speakers section.

EVM Object Format (EOF): Managing the Bytecode Chaos

Description

Currently, EVM bytecode, while being powerful and simple, is lacking structure. This leads to many complexities when introducing new EIPs and maintaining backwards compatibility. In this talk, we illustrate some use cases of the EVM Object Format (EOF). Next, we provide a quick overview of the main changes introduced by the EOF and related EIPs, along with code examples. Finally, we discuss potential benefits and drawbacks that could arise with the introduction of EOF

Nov 14th — 9:45 AM - 10:10 AM

Talk - Stage 3, Level 1

Attend Session Mark as interesting Export to Calendar Find Location

Tell me about similar sessions

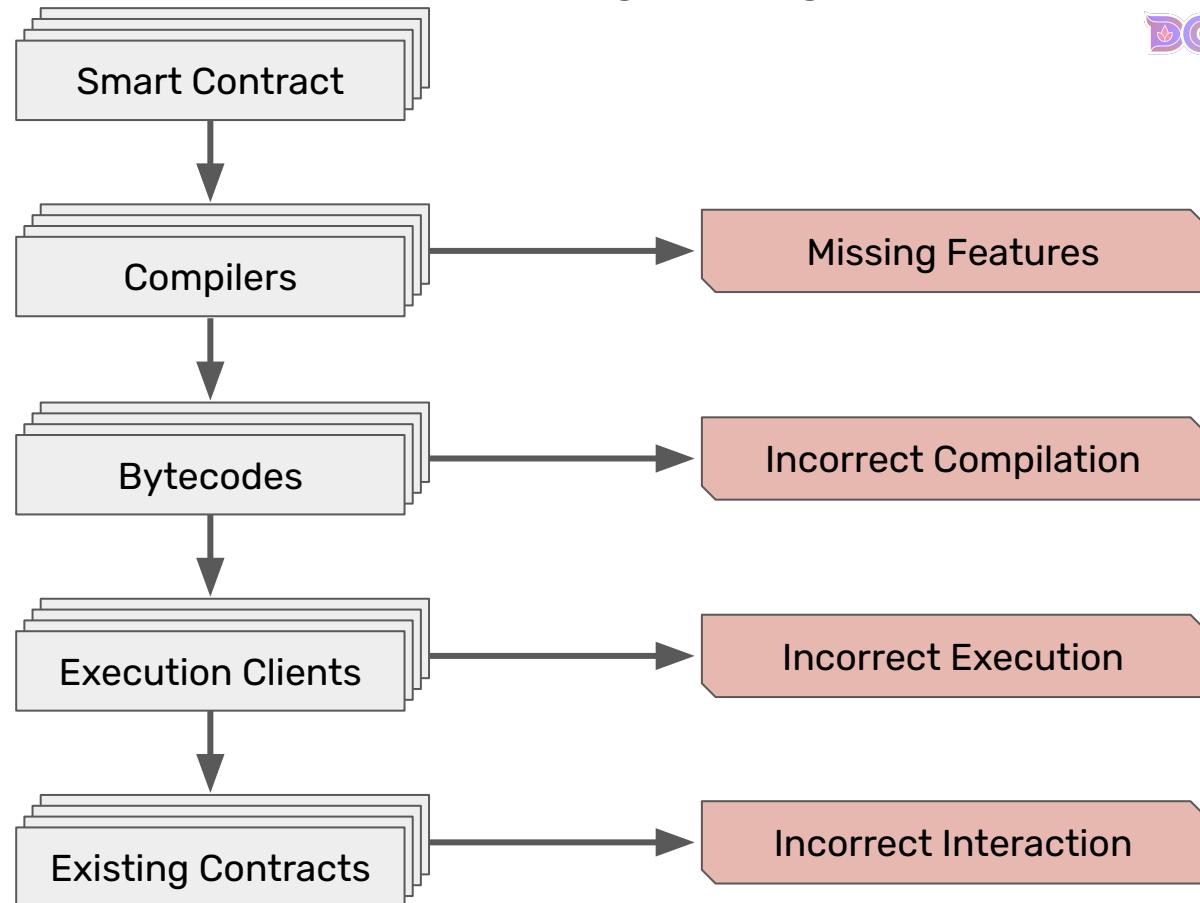
Speakers

Alex Murashkin

A Big Change in EVM



What is could go wrong?



Is this news?

No

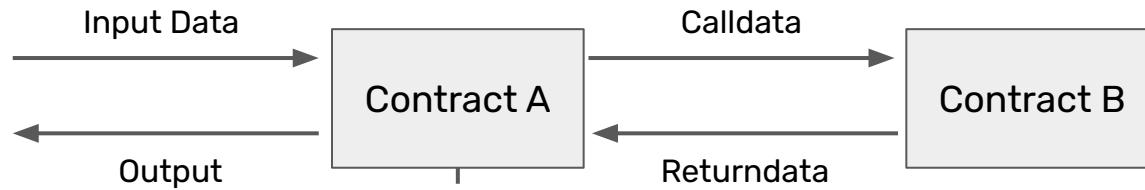
- Already lots of Testing

Emilie

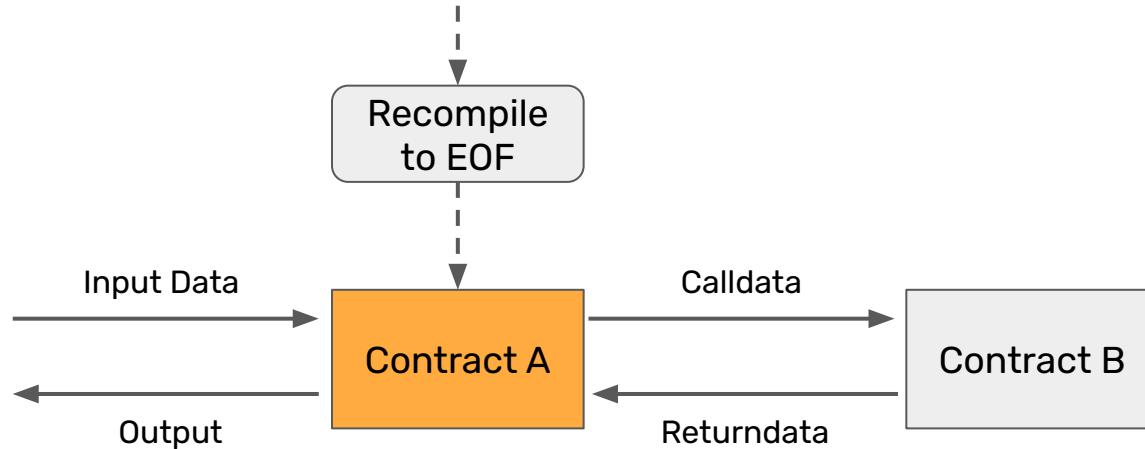
- Real Contracts
- Real Data
- Real Interactions



Existing Mainnet Transaction:



Emilie:



Emilie checks

- Storage Changes
- Emitted Events
- Calldata
- Returndata
- Execution Status

Emilie monitors

- Gas costs



Emilie finds

- Missing Compiler Features
- Incorrect Compilation
- Incorrect Execution
- Incorrect Interaction

Emilie contributes to the security of EOF



What can go wrong?

- 1. Gas Measurements in Storage, Output or Events**
 - a. Example: Gas Station Network
 - b. Events/Storage/Output will differ
- 2. Overall Gas Consumption exceeded**
 - a. Can lead to failure
 - b. Can pass more gas (re-simulate unchanged)
- 3. Fixed Gas Amounts being Passed**
 - a. Can lead to failure





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Thank You



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Section 1

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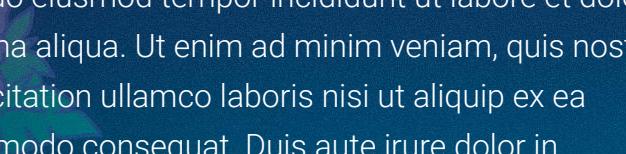
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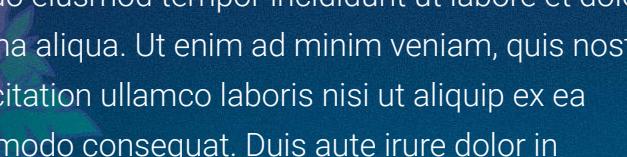
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“Number rules the universe.”
— Pythagoras

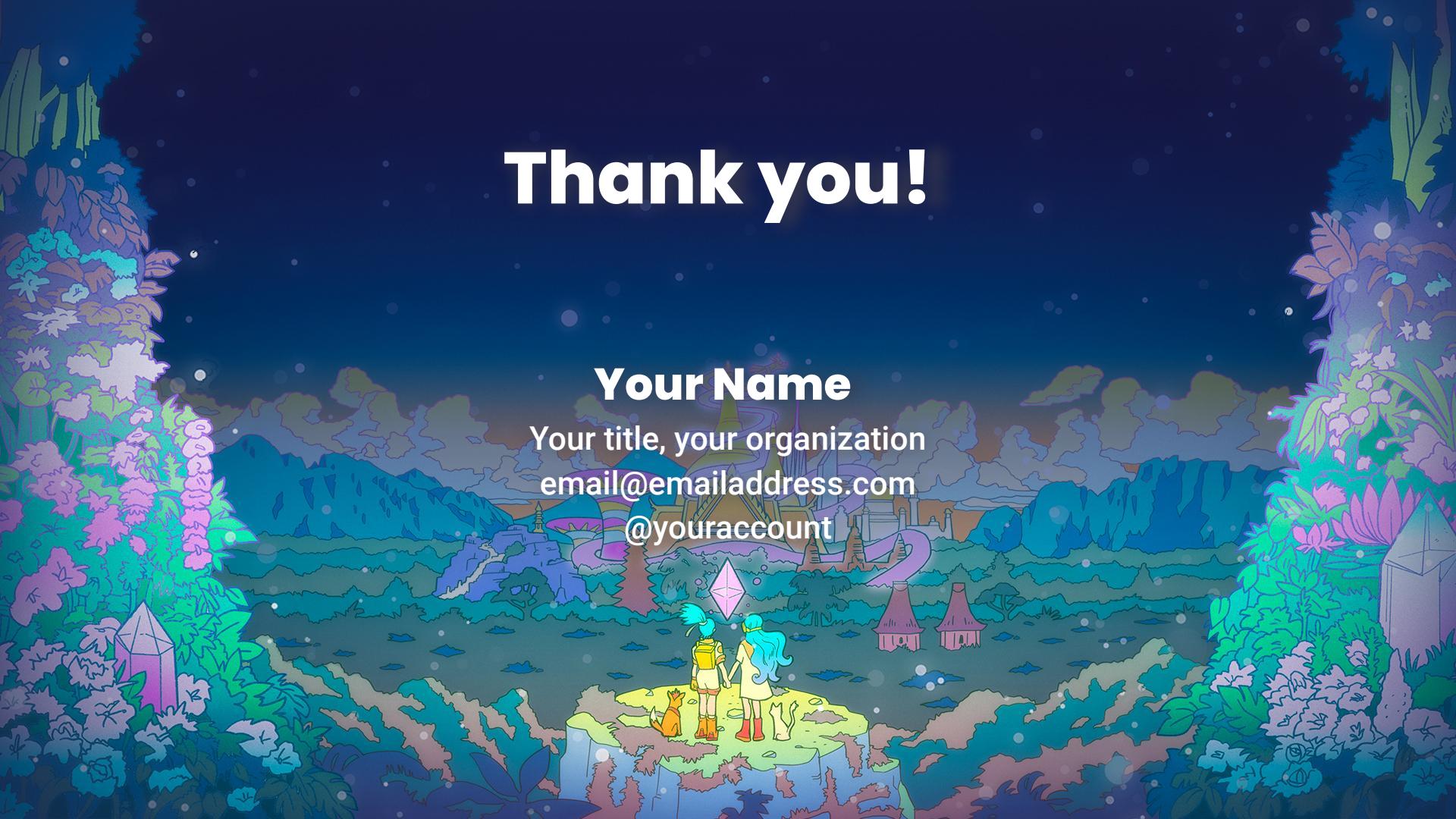
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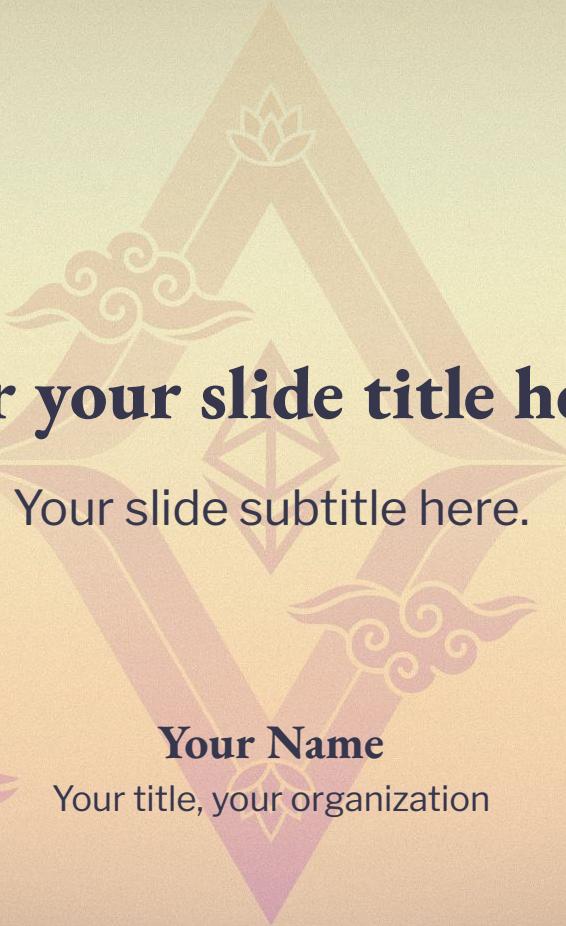
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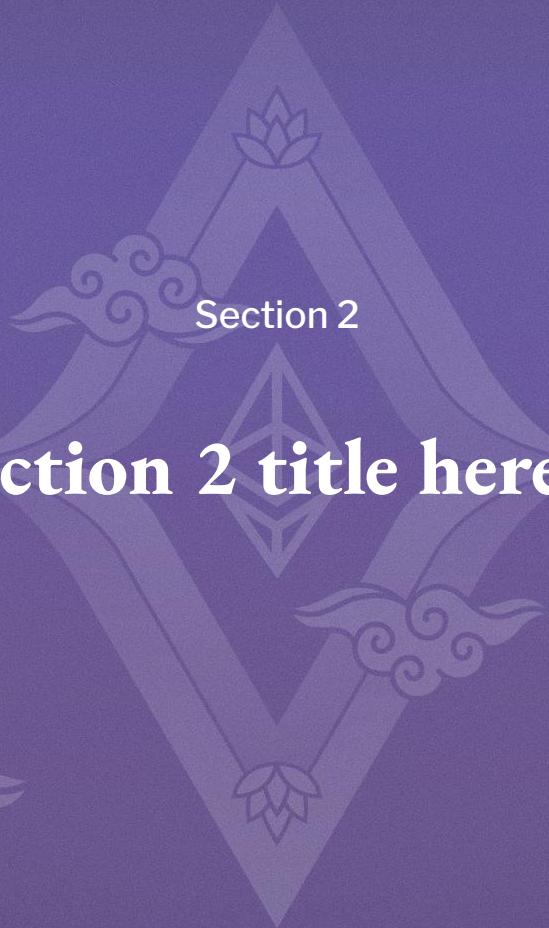
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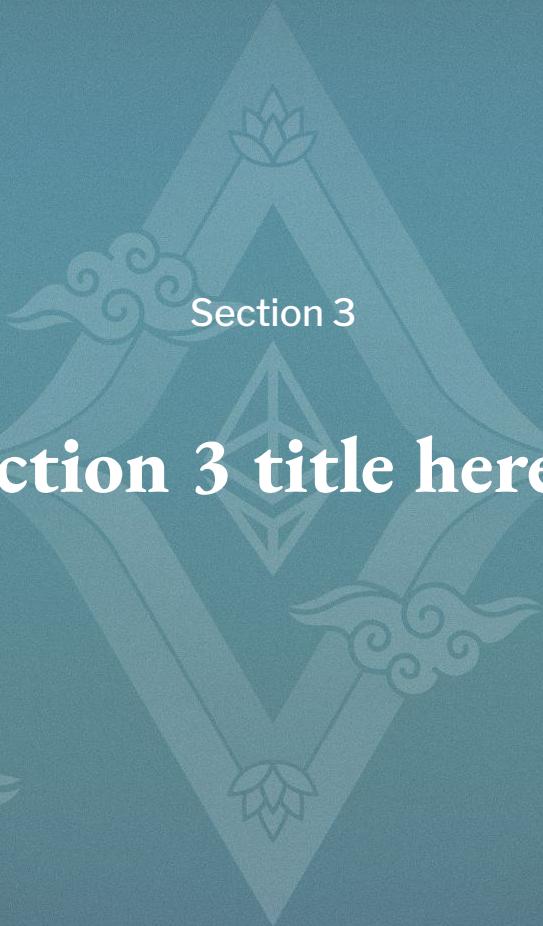




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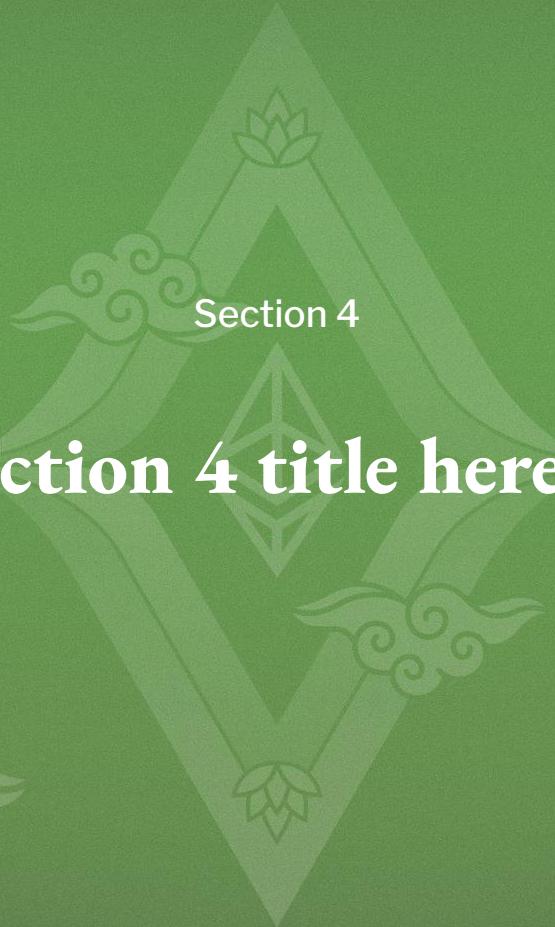
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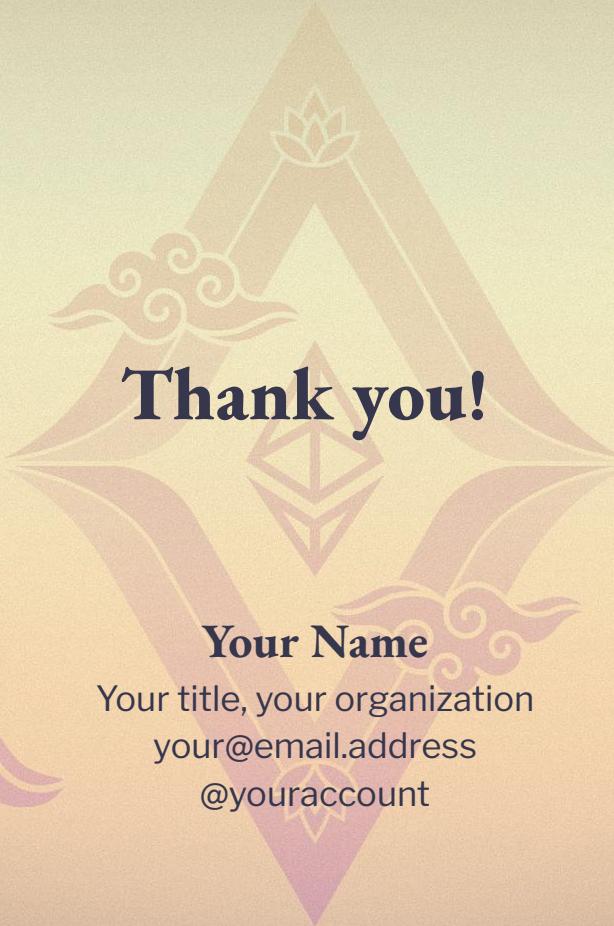


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“Number rules the universe.”

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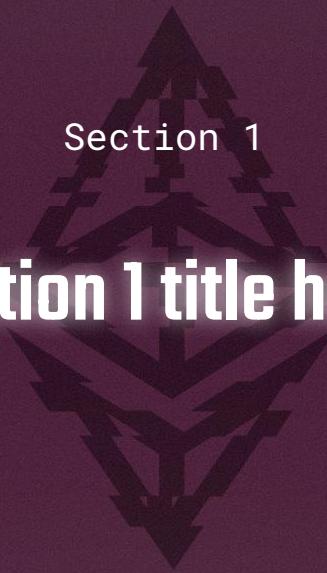


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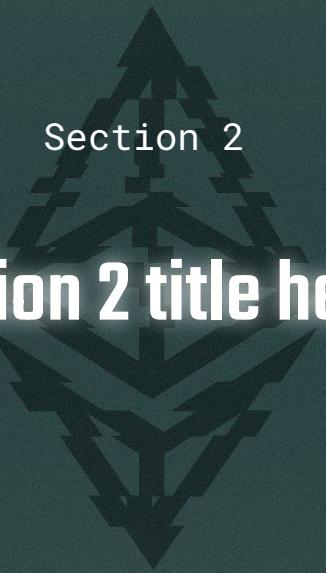
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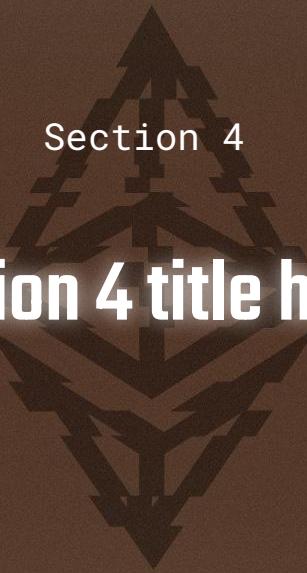
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Event 1



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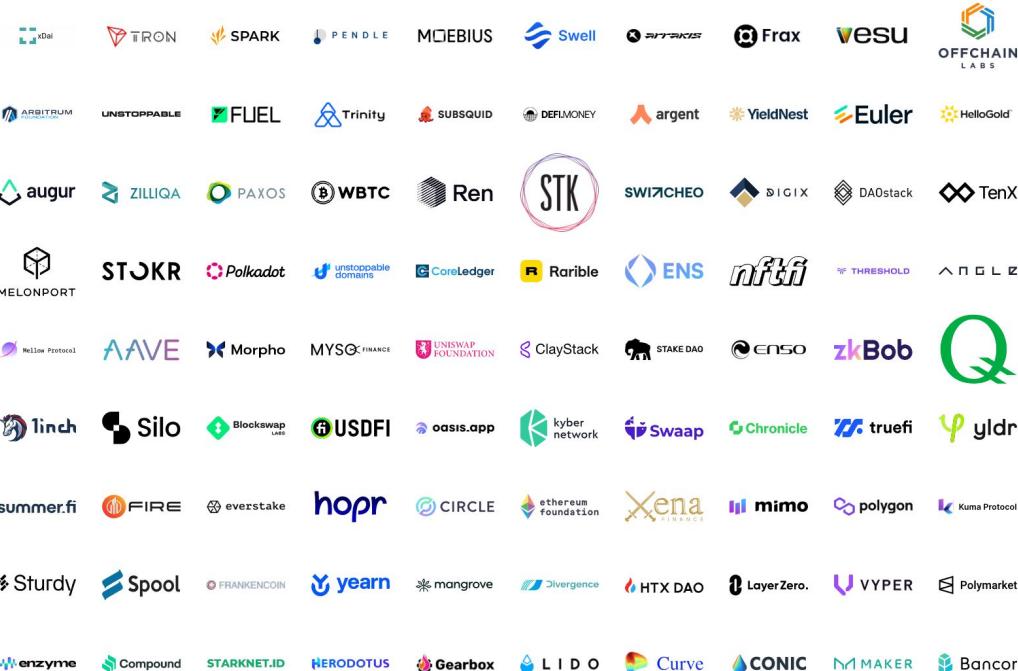
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