Smart Contracts Working Group

Github repository: https://github.com/hyperledger/smart-contracts-wg

(please send email to group’s chair sterzi@iti.gr for being added or make a pull request by following this link)

| Description | Smart contracts provide automation in blockchain solutions. They are immutable, decentralized and deterministic, which make them ideal to remove third-parties and let peer-to-peer interactions. Once agreed between the parties and deployed on a distributed ledger, their activities and outcomes can be verified, so they can be trusted by all stakeholders. Everybody involved in DLTs are interested in smart contracts and the benefits they bring, but are also worried because there are many aspects about smart contracts they don’t understand including legal and ethical insecurities. The main goal of this workgroup will be to give an academic perspective to this research topic and in parallel make clear to users, developers, researchers, businessmen, decision makers and others interested in smart contracts practical ways to utilize them on the different DLTs that are under the Hyperledger umbrella and explore all potentials from deploying them in everyday software solution scenarios. |

Charter

Please see Charter for the full text of the charter.

Scope

The scope is to define concepts regarding smart contracts and to produce material to describe the various aspects and meanings, trying to come up to standards or good practices. The audience for smart contracts is large and spans from researchers, developers, businessmen, decision makers, policy makers, law makers, software users, citizens to governments, banks, financial institutions, insurance providers, etc.

Two main research topics and separation of interests are:

1. **Technology oriented**
   a. Models of and mechanism for computation
   b. Formal guarantees on outputs of smart contracts
   c. Smart contract packaging, code reuse, and dependency auditing
   d. Generation of smart contracts from existing artifacts (natural language, business process, state machines, non smart-contract code)
   e. Data structures and state
   f. Privacy
   g. Tooling and compilers for existing virtual machines
   h. Design Patterns for Smart Contracts
   i. Upgradability of smart contracts

2. **Law oriented**
   a. Smart contracts as representatives of obligations and fulfillment
   b. Smart contracts law enforcement cascading actions

Please see Extended Scope for an extended version of Technology and Law topics.

Meetings

All Hyperledger meetings are run covered by the following Antitrust Policy and All are Welcome in the Hyperledger Community

Teleconference bi-weekly on Wednesday 3 PM GMT time. See the Calendar of Public Meetings for the next meeting and dial in details.
Join from PC, Mac, Linux, iOS or Android: https://zoom.us/my/hyperledger.community.

### Meeting Agendas

Please see [Meeting Agendas](#).

### Meeting Notes

Please see [Meeting Notes](#).

### Links to Ongoing Work

### Work Products

### Links to Completed Work

[Smart Contracts Taxonomy Categories Ver 1.0](#)

### Links to External Resources

Please see [Links to External Resources](#).

### Announcements

**Recent space activity**

- Tomomi Yamano
  - Members updated Jan 25, 2020 • view change

- Sofia Terzi
  - 2020-01-15 Meeting Agenda and Notes (Canelled) updated Jan 23, 2020 • view change
  - 2019-12-18 Meeting Agenda and Notes updated Jan 15, 2020 • view change
  - Smart Contracts Working Group updated Jan 15, 2020 • view change

- Nathalie C. Chan King Choy
  - Contact Information updated Dec 14, 2019 • view change

### Space contributors

- Tomomi Yamano (23 days ago)
- Sofia Terzi (26 days ago)
- Nathalie C. Chan King Choy (65 days ago)
- Kelly Cooper (75 days ago)
- Patrick Erichsen (96 days ago)
- ...