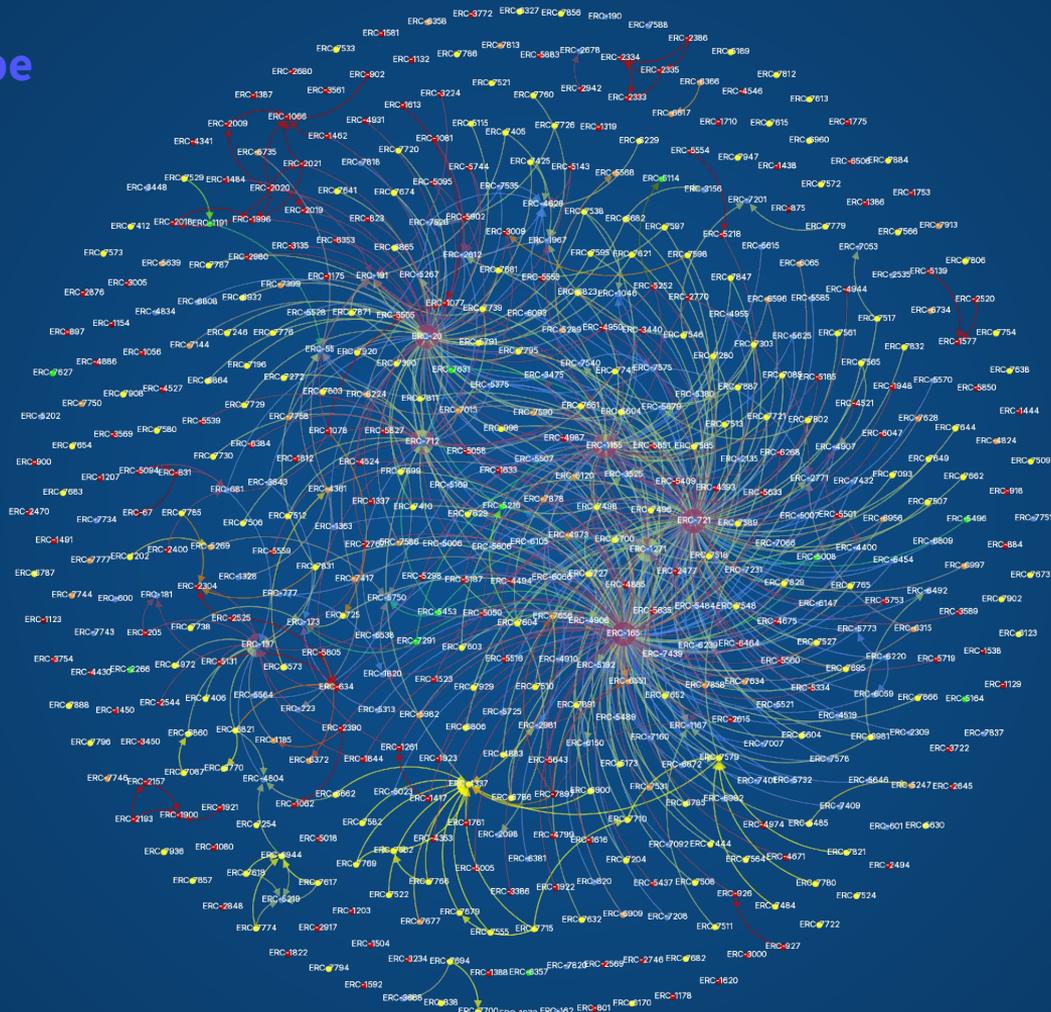


# The ERC tierlist

**Hadrien Croubois** – EthCC[8] July 2025

# The ERC landscape

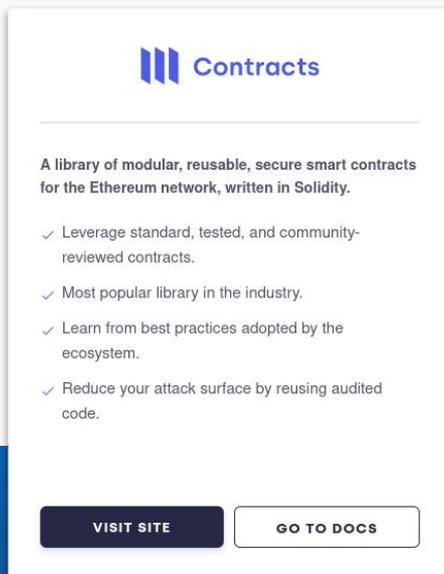


Final 116  
Last Call 12  
Review 45  
Draft 171  
Stagnant 170  
Withdrawn 6  
Total 520

# Contracts

@openzeppelin/contracts@5.4.0-rc.1

@openzeppelin/contracts-upgradeable@5.4.0-rc.1



The screenshot shows the GitHub repository page for OpenZeppelin Contracts. At the top, there is the OpenZeppelin logo (three vertical bars) followed by the word "Contracts". Below this is a horizontal line. The main text reads: "A library of modular, reusable, secure smart contracts for the Ethereum network, written in Solidity." Below this text is a list of four bullet points, each starting with a checkmark: "Leverage standard, tested, and community-reviewed contracts.", "Most popular library in the industry.", "Learn from best practices adopted by the ecosystem.", and "Reduce your attack surface by reusing audited code." At the bottom of the screenshot, there are two buttons: a dark blue button labeled "VISIT SITE" and a white button with a dark blue border labeled "GO TO DOCS".

 **Contracts**

---

A library of modular, reusable, secure smart contracts for the Ethereum network, written in Solidity.

- ✓ Leverage standard, tested, and community-reviewed contracts.
- ✓ Most popular library in the industry.
- ✓ Learn from best practices adopted by the ecosystem.
- ✓ Reduce your attack surface by reusing audited code.

[VISIT SITE](#) [GO TO DOCS](#)

God tier



Ecosystem  
shaping



Actually useful



Useless



Not even the  
authors  
understands it



In retrospect it  
was a bad idea



That is not even  
an ERC



# All view are my own

Please have some sense of humor and don't be offended

God tier



Ecosystem  
shaping



Actually useful



Useless



Not even the  
authors  
understands it



In retrospect it  
was a bad idea



That is not even  
an ERC



Standards Track: ERC

## ERC-1363: Payable Token

**Authors** Vittorio Minacori (@vittominacori)

**Created** 2018-08-30

**Requires** EIP-20, EIP-165

God tier 🤖	
Ecosystem shaping 👨‍🔬	
Actually useful 😐	ERC-1363
Useless 🤔	
Not even the authors understands it 😬	
In retrospect it was a bad idea 😞	
That is not even an ERC 😡	

God tier



Ecosystem  
shaping



Actually useful



ERC-1363

Useless



Not even the  
authors  
understands it



In retrospect it  
was a bad idea



That is not even  
an ERC



Standards Track: ERC

## ERC-20: Token Standard

**Authors** Fabian Vogelsteller <fabian@ethereum.org>, Vitalik Buterin <vitalik.buterin@ethereum.org>

**Created** 2015-11-19

God tier 	
Ecosystem shaping 	ERC-20
Actually useful 	ERC-1363
Useless 	
Not even the authors understands it 	
In retrospect it was a bad idea 	
That is not even an ERC 	

God tier  
😄

Ecosystem shaping  
🥳

ERC-20

Actually useful  
😊

ERC-1363

Useless  
😞

Not even the authors understands it  
😬

In retrospect it was a bad idea  
😓

That is not even an ERC  
😡

**Standards Track: ERC**

## ERC-165: Standard Interface Detection

**Authors** Christian Reitwießner <chris@ethereum.org>, Nick Johnson <nick@ethereum.org>, Fabian Vogelsteller <fabian@lukso.network>, Jordi Baylina <jordi@baylina.cat>, Konrad Feldmeier <konrad.feldmeier@brainbot.com>, William Entriken <github.com@phor.net>

**Created** 2018-01-23

**Requires** EIP-214

God tier 😇	
Ecosystem shaping 👨‍🔬	ERC-20
Actually useful 😐	ERC-1363
Useless 🤔	ERC-165
Not even the authors understands it 😬	
In retrospect it was a bad idea 😞	
That is not even an ERC 😡	

God tier  
😄

Ecosystem shaping  
😄

Actually useful  
😐

Useless  
😞

Not even the authors understands it  
😐

In retrospect it was a bad idea  
😞

That is not even an ERC  
😞

ERC-20

ERC-1363

ERC-165

**Standards Track: ERC**

## ERC-777: Token Standard

**Authors** Jacques Dafflon <mail@0xjac.com>, Jordi Baylina <jordi@baylina.cat>, Thomas Shababi <tom@truelevel.io>

**Created** 2017-11-20

**Requires** EIP-1820

God tier 😇	
Ecosystem shaping 👨‍🔬	ERC-20
Actually useful 😐	ERC-1363
Useless 🤔	ERC-165
Not even the authors understands it 😬	
In retrospect it was a bad idea 😞	ERC-777
That is not even an ERC 😡	

God tier  
🤖

Ecosystem shaping  
🤖

Actually useful  
😐

Useless  
🤔

Not even the authors understands it  
🤖

In retrospect it was a bad idea  
🤔

That is not even an ERC  
🤔

ERC-20

ERC-1363

ERC-165

ERC-777

**Standards Track: ERC**

## ERC-721: Non-Fungible Token Standard

**Authors** William Entriken (@fulldecent), Dieter Shirley <dete@axiomzen.co>, Jacob Evans <jacob@dekz.net>, Nastassia Sachs <nastassia.sachs@protonmail.com>

**Created** 2018-01-24

**Requires** EIP-165

God tier 😍		
Ecosystem shaping 👩🏫	ERC-20	ERC-721
Actually useful 😊	ERC-1363	
Useless 🤔	ERC-165	
Not even the authors understands it 🙄		
In retrospect it was a bad idea 😞	ERC-777	
That is not even an ERC 😡		

God tier 😇		
Ecosystem shaping 👨‍🔬	ERC-20	ERC-721
Actually useful 😊	ERC-1363	
Useless 😞	ERC-165	
Not even the authors understands it 🙄		
In retrospect it was a bad idea 😓	ERC-777	
That is not even an ERC 😡		

**Standards Track: ERC**

## ERC-1155: Multi Token Standard

**Authors** Witek Radomski <witek@enjin.io>, Andrew Cooke <ac0dem0nk3y@gmail.com>, Philippe Castonguay (@phabc) <pc@horizongames.net>, James Therien <james@turing-complete.com>, Eric Binet <eric@enjin.io>, Ronan Sandford (@wighawag) <wighawag@gmail.com>

**Created** 2018-06-17

**Requires** EIP-165

<p>God tier</p> 		
<p>Ecosystem shaping</p> 	<p>ERC-20</p>	<p>ERC-721</p>
<p>Actually useful</p> 	<p>ERC-1363</p>	<p>ERC-1155</p>
<p>Useless</p> 	<p>ERC-165</p>	
<p>Not even the authors understands it</p> 		
<p>In retrospect it was a bad idea</p> 	<p>ERC-777</p>	
<p>That is not even an ERC</p> 		

God tier 😇		
Ecosystem shaping 👨‍🔬	ERC-20	ERC-721
Actually useful 😊	ERC-1363	ERC-1155
Useless 😓	ERC-165	
Not even the authors understands it 🙄		
In retrospect it was a bad idea 😞	ERC-777	
That is not even an ERC 😡		

**Standards Track: ERC**

### ERC-223: Token with transaction handling model 🗨️ <>

Token with transaction handling model designed to behave identical to native currency (ether)

**Authors** Dexaran (@Dexaran) <dexaran@ethereumclassic.org>

**Created** 2017-05-03

<p>God tier</p> 		
<p>Ecosystem shaping</p> 	<p>ERC-20</p>	<p>ERC-721</p>
<p>Actually useful</p> 	<p>ERC-1363</p>	<p>ERC-1155</p>
<p>Useless</p> 	<p>ERC-165</p>	
<p>Not even the authors understands it</p> 		
<p>In retrospect it was a bad idea</p> 	<p>ERC-777</p>	<p>ERC-223</p>
<p>That is not even an ERC</p> 		

God tier 😇		
Ecosystem shaping 👨‍🔬	ERC-20	ERC-721
Actually useful 😬	ERC-1363	ERC-1155
Useless 🤔	ERC-165	
Not even the authors understands it 🙄		
In retrospect it was a bad idea 😞	ERC-777	ERC-223
That is not even an ERC 😓		

### ERC: transferAndCall Token Standard #677

🔒 Closed

se3000 opened on Jul 19, 2017 · edited by se3000 Edits ▾ ⋮

**Preamble**

```

ERC: 677
Title: transferAndCall Token Standard
Type: Informational
Category: ERC
Status: Draft
Created: 2017-07-17
Requires: ERC20

```

<p>God tier</p> 		
<p>Ecosystem shaping</p> 	<p>ERC-20</p>	<p>ERC-721</p>
<p>Actually useful</p> 	<p>ERC-1363</p>	<p>ERC-1155</p>
<p>Useless</p> 	<p>ERC-165</p>	
<p>Not even the authors understands it</p> 		
<p>In retrospect it was a bad idea</p> 	<p>ERC-777</p>	<p>ERC-223</p>
<p>That is not even an ERC</p> 	<p>677</p>	

God tier 😇		
Ecosystem shaping 👩🏫	ERC-20	ERC-721
Actually useful 😊	ERC-1363	ERC-1155
Useless 😞	ERC-165	
Not even the authors understands it 🙄		
In retrospect it was a bad idea 😞	ERC-777	ERC-223
That is not even an ERC 😞	677	

**Standards Track: ERC**

## ERC-2612: Permit Extension for EIP-20 Signed Approvals 🗨️ <>

### EIP-20 approvals via EIP-712 secp256k1 signatures

**Authors** Martin Lundfall (@Mrchico)

**Created** 2020-04-13

**Requires** EIP-20, EIP-712

<p>God tier</p> 				
<p>Ecosystem shaping</p> 	ERC-20	ERC-721		
<p>Actually useful</p> 	ERC-1363	ERC-1155	ERC-2612	
<p>Useless</p> 	ERC-165			
<p>Not even the authors understands it</p> 				
<p>In retrospect it was a bad idea</p> 	ERC-777	ERC-223		
<p>That is not even an ERC</p> 	677			

God tier 👁️			
Ecosystem shaping 👁️	ERC-20	ERC-721	
Actually useful 😐	ERC-1363	ERC-1155	ERC-2612
Useless 🤔	ERC-165		
Not even the authors understands it 🙄			
In retrospect it was a bad idea 😞	ERC-777	ERC-223	
That is not even an ERC 😞	677		

**Standards Track: Interface**

## EIP-712: Typed structured data hashing and signing 🗨️ <>

A procedure for hashing and signing of typed structured data as opposed to just bytestrings.

**Authors** Remco Bloemen (@Recmo), Leonid Logvinov (@LogvinovLeon), Jacob Evans (@dekz)

**Created** 2017-09-12

**Requires** EIP-155, EIP-191

<p>God tier 🤖</p>	EIP-712		
<p>Ecosystem shaping 👨‍🔧</p>	ERC-20	ERC-721	
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612
<p>Useless 😓</p>	ERC-165		
<p>Not even the authors understands it 🙄</p>			
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223	
<p>That is not even an ERC 😡</p>	677		

God tier 😄	EIP-712		
Ecosystem shaping 👨‍🔬	ERC-20	ERC-721	
Actually useful 😊	ERC-1363	ERC-1155	ERC-2033
Useless 😞	ERC-165	<div> <p><b>Standards Track: ERC</b></p> <h2>ERC-1271: Standard Signature Validation Method for Contracts <span>🗨 &lt;&gt;</span></h2> <h3>Standard way to verify a signature when the account is a smart contract</h3> <p><b>Authors</b> Francisco Giordano (@frangio), Matt Condon (@shrugs), Philippe Castonguay (@PhABC), Amir Bandali (@abandali1), Jorge Izquierdo (@izqui), Bertrand Masius (@catageek)</p> <p><b>Created</b> 2018-07-25</p> </div>	
Not even the authors understands it 🙄			
In retrospect it was a bad idea 😞	ERC-777	ERC-223	
That is not even an ERC 😞	677		

<p>God tier</p> 	EIP-712		
<p>Ecosystem shaping</p> 	ERC-20	ERC-721	ERC-1271
<p>Actually useful</p> 	ERC-1363	ERC-1155	ERC-2612
<p>Useless</p> 	ERC-165		
<p>Not even the authors understands it</p> 			
<p>In retrospect it was a bad idea</p> 	ERC-777	ERC-223	
<p>That is not even an ERC</p> 	677		

God tier 😄	EIP-712		
Ecosystem shaping 👨‍🔧	ERC-20	ERC-721	ERC-1271
Actually useful 😊	ERC-1363		
Useless 😞	ERC-165		
Not even the authors understands it 🙄			
In retrospect it was a bad idea 😓	ERC-777	ERC-223	
That is not even an ERC 😞	677		

**Draft** Standards Track: ERC

## ERC-4337: Account Abstraction Using Alt Mempool

An account abstraction proposal which completely avoids consensus-layer protocol changes, instead relying on higher-layer infrastructure.

**Authors** Vitalik Buterin (@vbuterin), Yoav Weiss (@yoavw), Dror Tirosh (@drortirosh), Shahaf Nacson (@shahafn), Alex Forshtat (@forshtat), Kristof Gazso (@kristofgazso), Tjaden Hess (@tjade273)

**Created** 2021-09-29

**Discussion Link** <https://ethereum-magicians.org/t/erc-4337-account-abstraction-via-entry-point-contract-specification/7160>

**Requires** EIP-712, EIP-7562



God tier 👑	EIP-712				
Ecosystem shaping 👨‍🔧	ERC-20	ERC-721	ERC-1271	ERC-4337	
Actually useful 😊	ERC-1363				
Useless 😞	ERC-165				
Not even the authors understands it 🙄					
In retrospect it was a bad idea 😞	ERC-777	ERC-223			
That is not even an ERC 😞	677				

 Draft Standards Track: ERC

## ERC-7562: Account Abstraction Validation Scope Rules 🗨️ <>

A set of limitations on validation EVM code to protect Account Abstraction nodes from denial-of-service attacks through unpaid computation.

**Authors** Yoav Weiss (@yoavw), Dror Tirosh (@drortirosh), Alex Forshtat (@forshtat), Shahaf Nacson (@shahafn)

**Created** 2023-09-01

**Discussion Link** <https://ethereum-magicians.org/t/erc-7562-account-abstraction-validation-scope-rules/16683>

<p>God tier 🤖</p>	EIP-712				
<p>Ecosystem shaping 👨‍🔬</p>	ERC-20	ERC-721	ERC-1271	ERC-4337	
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612		
<p>Useless 😓</p>	ERC-165				
<p>Not even the authors understands it 🙄</p>	ERC-7562				
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223			
<p>That is not even an ERC 😡</p>	677				

God tier 😍	EIP-712				
Ecosystem shaping 👨‍🔬	ERC-20	ERC-721	ERC-1271	ERC-4337	
Actually useful 😊	ERC-1363	<div style="border: 1px solid black; padding: 5px;"> <span style="background-color: #ffc107; padding: 2px;">📌 Draft</span> <span style="background-color: #17a2b8; color: white; padding: 2px;">Standards Track: ERC</span> <h2 style="margin: 0;">ERC-6900: Modular Smart Contract Accounts <span style="float: right;">🗨️ &lt;&gt;</span></h2> <h3 style="margin: 0;">Interfaces for smart contract accounts and modules, optionally supporting upgradability and introspection</h3> <p><b>Authors</b> Adam Egyed (@adamegyed), Fangting Liu (@trinity-0111), Jay Paik (@jaypaik), Yoav Weiss (@yoavw), Huawei Gu (@huaweigu), Daniel Lim (@dlim-circle), Ruben Koch (@0xrubes), David Philipson (@dphilipson), Howy Ho (@howydev), Nikita Belenkov (@nikita-quantstamp), zer0dot (@zer0dot), David Kim (@PowerStream3604)</p> <p><b>Created</b> 2023-04-18</p> <p><b>Discussion Link</b> <a href="https://ethereum-magicians.org/t/eip-modular-smart-contract-accounts-and-plugins/13885">https://ethereum-magicians.org/t/eip-modular-smart-contract-accounts-and-plugins/13885</a></p> <p><b>Requires</b> EIP-165, EIP-1271, EIP-4337</p> </div>			
Useless 😞	ERC-165				
Not even the authors understands it 😏	ERC-7562				
In retrospect it was a bad idea 😓	ERC-777	ERC-223			
That is not even an ERC 😬	677				

<p>God tier 🤩</p>	EIP-712				
<p>Ecosystem shaping 👩🏫</p>	ERC-20	ERC-721	ERC-1271	ERC-4337	
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612		
<p>Useless 😓</p>	ERC-165				
<p>Not even the authors understands it 😐</p>	ERC-7562	ERC-6900			
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223			
<p>That is not even an ERC 😡</p>	677				



<p>God tier 🤖</p>	EIP-712				
<p>Ecosystem shaping 👨‍🔬</p>	ERC-20	ERC-721	ERC-1271	ERC-4337	
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612	ERC-2771	
<p>Useless 😓</p>	ERC-165				
<p>Not even the authors understands it 🙄</p>	ERC-7562	ERC-6900			
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223			
<p>That is not even an ERC 😡</p>	677				

God tier 😄	EIP-712				
Ecosystem shaping 👩🏫	ERC-20	ERC-721	ERC-1271	ERC-4337	
Actually useful 😊	ERC-1363	ERC-1155	ERC-2612	ERC-2771	
Useless 😞	ERC-165				
Not even the authors understands it 🙄	ERC-7562				
In retrospect it was a bad idea 😓	ERC-777	ERC-223			
That is not even an ERC 😡	677				

**Standards Track: ERC**

## ERC-6093: Custom errors for commonly-used tokens 🗨️ <>

Lists custom errors for common token implementations

**Authors** Ernesto García (@ernestognw), Francisco Giordano (@frangio), Hadrien Croubois (@Amxx)

**Created** 2022-12-06

**Requires** EIP-20, EIP-721, EIP-1155

<p>God tier 🤖</p>	EIP-712				
<p>Ecosystem shaping 👨‍🔧</p>	ERC-20	ERC-721	ERC-1271	ERC-4337	
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612	ERC-2771	
<p>Useless 😓</p>	ERC-165	ERC-6093			
<p>Not even the authors understands it 🙄</p>	ERC-7562	ERC-6900			
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223			
<p>That is not even an ERC 😡</p>	677				

God tier 😄	EIP-712				
Ecosystem shaping 👩🏫	ERC-20	ERC-721	ERC-1271	ERC-4337	
Actually useful 😊	ERC-1363	ERC-1155	ERC-2612	ERC-2771	
Useless 😞	ERC-165				
Not even the authors understands it 🙄	ERC-7562				
In retrospect it was a bad idea 😓	ERC-777	ERC-223			
That is not even an ERC 😡	677				

**Standards Track: ERC**

## ERC-7751: Wrapping of bubbled up reverts 🗨️ <>

### Handling bubbled up reverts using custom errors with additional context

**Authors** Daniel Gretzke (@gretzke), Sara Reynolds (@snreynolds), Alice Henshaw (@hensha256), Marko Veniger <marko.veniger@tenderly.co>, Hadrien Croubois (@Amxx)

**Created** 2024-08-06

<p>God tier 🤖</p>	EIP-712								
<p>Ecosystem shaping 👨‍🔬</p>	ERC-20	ERC-721	ERC-1271	ERC-4337					
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612	ERC-2771	ERC-7551				
<p>Useless 😓</p>	ERC-165	ERC-6093							
<p>Not even the authors understands it 🙄</p>	ERC-7562	ERC-6900							
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223							
<p>That is not even an ERC 😡</p>	677								

<p>God tier 🤖</p>	EIP-712				
<p>Ecosystem shaping 🧑🏻‍🔬</p>	ERC-20	ERC-721	ERC-1271	ERC-4337	
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612	ERC-2771	
<p>Useless 😞</p>	ERC-165				
<p>Not even the authors understands it 🙄</p>	ERC-7562				
<p>In retrospect it was a bad idea 😓</p>	ERC-777	ERC-223			
<p>That is not even an ERC 😡</p>	677				

Withdrawn
Standards Track: ERC

## ERC-1154: Oracle Interface 🗨️ <>

**Authors**      Alan Lu (@cag)

**Created**        2018-06-13

**Discussion Link**   <https://github.com/ethereum/EIPs/issues/1161>

<p>God tier 😇</p>	EIP-712			ERC-4337	
<p>Ecosystem shaping 👩‍🔬</p>	ERC-20	ERC-721	ERC-1271		
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612	ERC-2771	
<p>Useless 😓</p>	ERC-165	ERC-6093	ERC-1154		ERC-7551
<p>Not even the authors understands it 😐</p>	ERC-7562	ERC-6900			
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223			
<p>That is not even an ERC 😡</p>	677				

God tier 😄	EIP-712								
Ecosystem shaping 👩🏫	ERC-20	ERC-721	ERC-1271		ERC-4337				
Actually useful 😊	ERC-1363	ERC-1155	ERC-2612	ERC-2771					
Useless 😞	ERC-165								
Not even the authors understands it 🙄	ERC-7562								
In retrospect it was a bad idea 😞	ERC-777	ERC-223							
That is not even an ERC 😞	677								

**Standards Track: ERC**

### ERC-2535: Diamonds, Multi-Facet Proxy 🗨️ <>

Create modular smart contract systems that can be extended after deployment.

**Authors** Nick Mudge (@mudgen)

**Created** 2020-02-22

<p>God tier 🤖</p>	EIP-712								
<p>Ecosystem shaping 👩🏫</p>	ERC-20	ERC-721	ERC-1271	ERC-4337					
<p>Actually useful 😊</p>	ERC-1363	ERC-1155	ERC-2612	ERC-2771					
<p>Useless 🤔</p>	ERC-165	ERC-6093	ERC-1154		ERC-7551	ERC-2535			
<p>Not even the authors understands it 🙄</p>	ERC-7562	ERC-6900							
<p>In retrospect it was a bad idea 😞</p>	ERC-777	ERC-223							
<p>That is not even an ERC 😡</p>	677								

God tier 😇	EIP-712								
Ecosystem shaping 👨‍🔧	ERC-20	ERC-721	ERC-1271	ERC-4337					
Actually useful 😊	ERC-1363	ERC-1155	ERC-2612	ERC-2771					
Useless 😞	ERC-165								
Not even the authors understands it 🙄	ERC-7562								
In retrospect it was a bad idea 😓	ERC-777	ERC-223							
That is not even an ERC 😡	677								

**Standards Track: ERC**

### ERC-7201: Namespaced Storage Layout 🗨 <>

Conventions for the storage location of structs in the namespaced storage pattern.

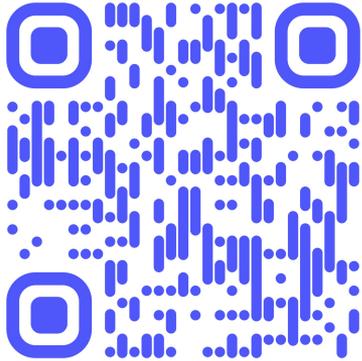
**Authors** Francisco Giordano (@frangio), Hadrien Croubois (@Amxx), Ernesto García (@ernestognw), Eric Lau (@ericglau)

**Created** 2023-06-20

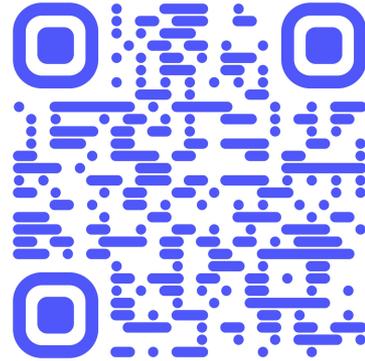


# Become an ERC contributor

Write, review, implement



<https://eips.ethereum.org/EIPS/eip-1>



<https://ethereum-magicians.org/>

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**forum.openzeppelin.com**