

# EIP 777: ERC-777 Token Standard

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: **Note:** The following is an excerpt from the official Ethereum site. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Table 1: Data sheet for Token Standard

|               |                                                                                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------|
| Title         | Token Standard                                                                                                        |
| Author        | Jacques Dafflon, Jordi Baylina, Thomas Shababi                                                                        |
| Status        | Final                                                                                                                 |
| Created       | 2017-11-20                                                                                                            |
| Description   | <a href="http://eips.ethereum.org/EIPS/eip-777">http://eips.ethereum.org/EIPS/eip-777</a>                             |
| Specification | <a href="http://eips.ethereum.org/EIPS/eip-777#Specification">http://eips.ethereum.org/EIPS/eip-777#Specification</a> |
| Category      | ERC                                                                                                                   |
| Requires      | <a href="#">1820</a>                                                                                                  |

## Abstract

*This standard defines a new way to interact with a token contract while remaining backward compatible with ERC20.*

*It defines advanced features to interact with tokens. Namely, operators to send tokens on behalf of another address—contract or regular account—and send/receive hooks to offer token holders more control over their tokens.*

*It takes advantage of [ERC1820](#) to find out whether and where to notify contracts and regular addresses when they receive tokens as well as to allow compatibility with already-deployed contracts.*

## Motivation

*This standard tries to improve upon the widely used ERC20 token standard. The main advantages of this standard are:*

1. Uses the same philosophy as Ether in that tokens are sent with `send(dest, value, data)`.
1. Both contracts and regular addresses can control and reject which token they send by registering a `tokensToSend` hook. (Rejection is done by reverting in the hook function.)

1. *Both contracts and regular addresses can control and reject which token they receive by registering a `tokensReceived` hook. (Rejection is done by reverting in the hook function.)*
1. *The `tokensReceived` hook allows to send tokens to a contract and notify it in a single transaction, unlike ERC20 which requires a double call (`approve`/`transferFrom`) to achieve this.*
1. *The holder can “authorize” and “revoke” operators which can send tokens on their behalf. These operators are intended to be verified contracts such as an exchange, a cheque processor or an automatic charging system.*
1. *Every token transaction contains `data` and `operatorData` bytes fields to be used freely to pass data from the holder and the operator, respectively.*

It is backward compatible with wallets that do not contain the `tokensReceived` hook function by deploying a proxy contract implementing the `tokensReceived` hook for the wallet.

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