

# Wikipedia Page Titled: Alternating bit protocol

Below is the text of the Wikipedia page

`en.wikipedia.org/wiki/Alternating_bit_protocol`

fetchd on 7 September 2015. The page's *See also* section and one reference have been omitted. Text that was a link to another page is [colored like this](#).

**Alternating bit protocol** (ABP) is a simple [network protocol](#) operating at the [data link layer](#) that retransmits lost or corrupted messages. It can be seen as a special case of the [Sliding window protocol](#) where a simple timer restricts the order of messages to ensure receivers send messages in turn while using a window of 1 bit.

[Messages](#) are sent from [transmitter](#) A to [receiver](#) B. Assume that the [channel](#) from A to B is initialized and that there are no messages in transit. Each message from A to B contains a data part and a one-bit sequence number, i.e., a value that is 0 or 1. B has two [acknowledge characters](#) that it can send to A: ACK0 and ACK1.

When A sends a message, it resends it continuously, with the same sequence number, until it receives an acknowledgment from B that contains the same sequence number. When that happens, A [complements](#) (flips) the sequence number and starts transmitting the next message.

When B receives a message that is not corrupted and has sequence number 0, it starts sending ACK0 and keeps doing so until it receives a valid message with number 1. Then it starts sending ACK1, etc.

This means that A may still receive ACK0 when it is already transmitting messages with sequence number one. (And vice versa.) It treats such messages as [negative-acknowledge characters](#) (NAKs). The simplest behaviour is to ignore them all and continue transmitting.

The protocol may be initialized by sending bogus messages and acks with sequence number 1. The first message with sequence number 0 is a real message.

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