

# **ANALYSIS OF MILLIPEDE'S WALKING MOVEMENT**

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when walking.....

overall leg movements look like wave

Characteristic

**Question**

How do millipedes control the walking  
with waves of legs?

# Purpose

Making the most basic model  
of millipedes' walking  
to study millipedes' walking



Wave direction

waves are created by difference of timing  
the timing of the forward leg is delayed

## Hypothesis

### Element of the basic millipedes' walking

- all legs have the same periodic movement
- a leg has difference of timing from next legs

# Modeling

## millipede

It's possible to control each body segment by ladder type nervous system.

All legs make same periodic movement.

Timing delay from back to front.

## model

Assign a body segment to a micro computer also a body segment to a pair of legs.

Program the same movement to all micro computers and repeat it.

Sending a signal to forward body segments  
Delay timing when the micro computer receives a signal.

# Future perspective

each segment generates a basic walking movement by judging the timing which legs should move



they can control their walking without depending on number of segments

millipedes can have many segments and legs