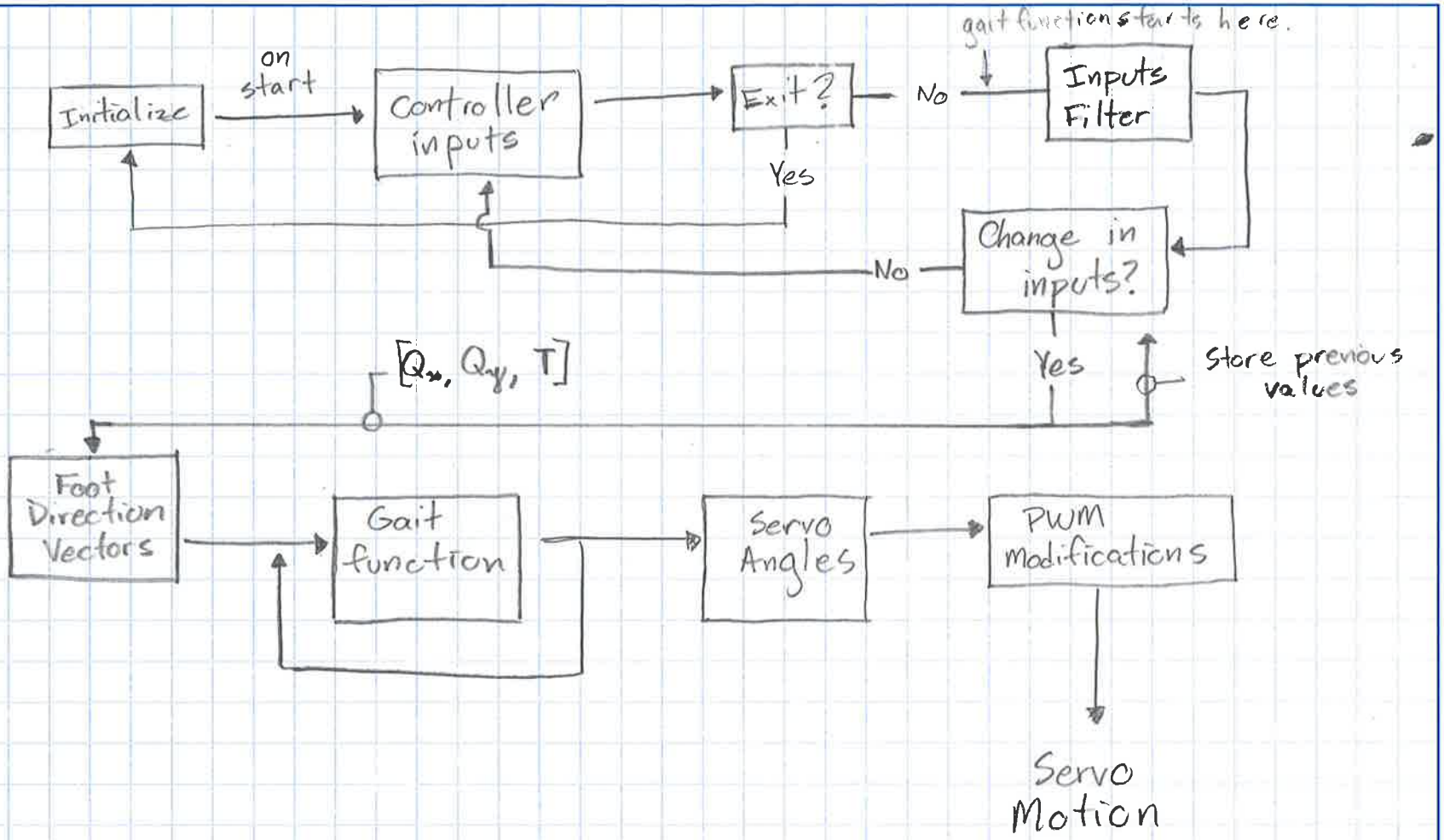
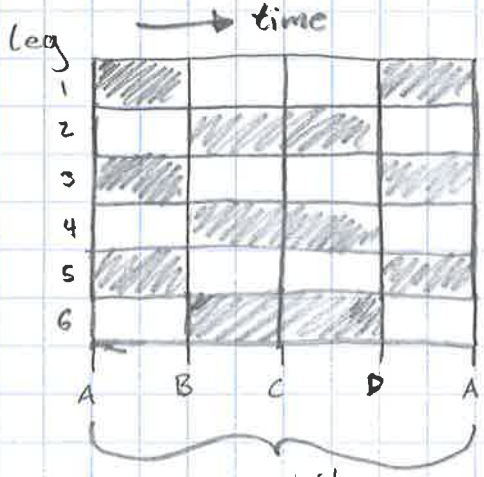
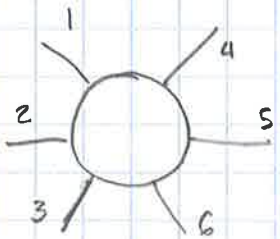
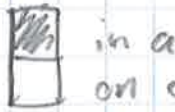


INTERSTATES

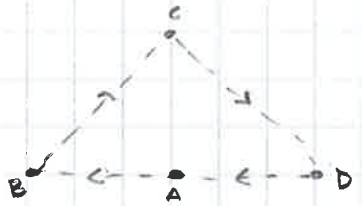


one gait sequence

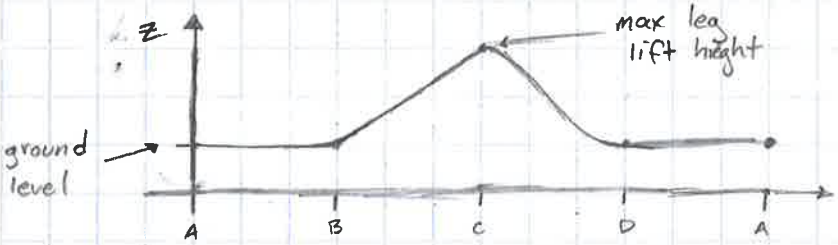




in air
on ground



t_s : is the program update rate; x # of times a second.



Δt has a fixed # of steps larger $|x', y'|$ results in more steps jumped to.

→ When D → B change in x, y is opposite x', y'
When B → C change in x, y is in the direction of x', y'

One step has an associated change in z
- When B → C change in z is (+)
- When C → D change in z is (−)

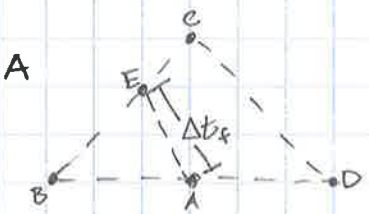
the step reached in the itteration is indexed and cached. This dictates how far the leg is in the step sequence.

# of steps

If initial movement:
Legs 1, 3, 5 move A → C (stun all x, y motion)

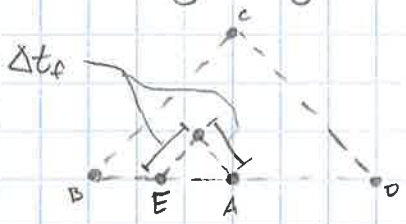
If final movement → Δt_f is fixed parameter

If leg in the air
Draw vector back to A



E is the point the leg is at when motion stops

If leg on ground

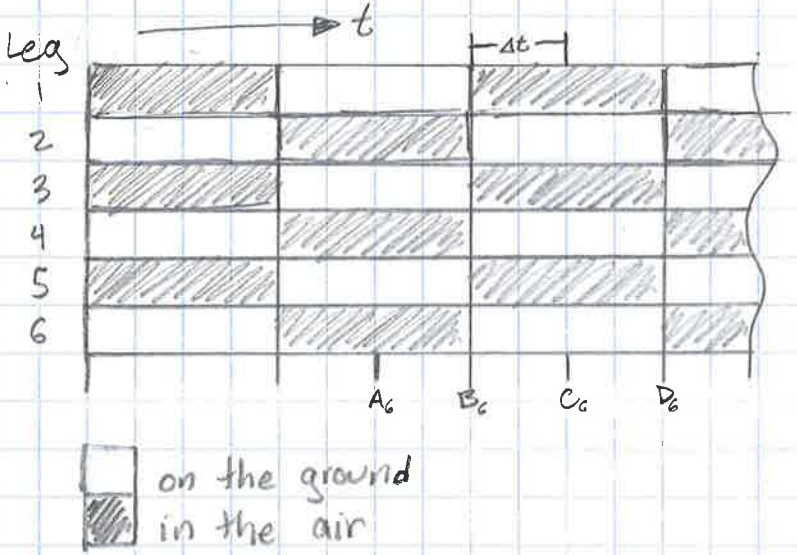


INTERSTATES

Gait Algorithm

inputs: $[x', y']$ for legs 1-6

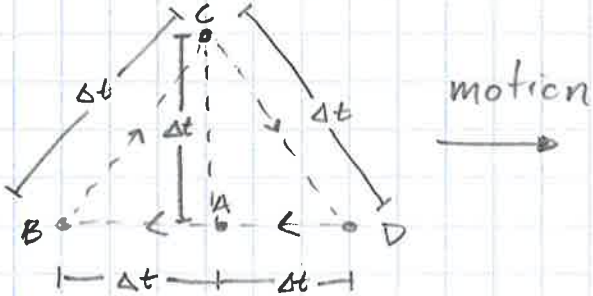
$|x', y'|$ determines Δt



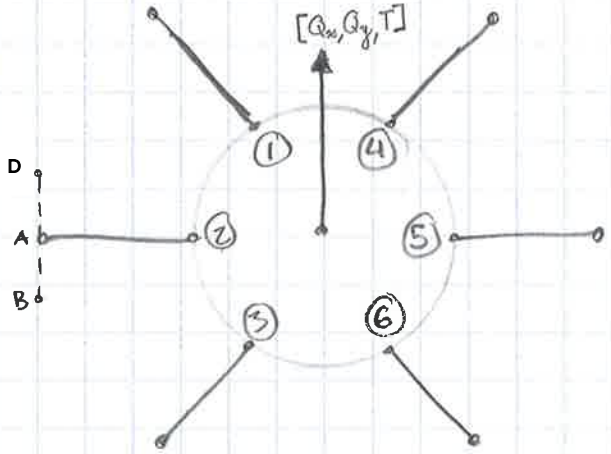
on the ground

in the air

foot motion sequence



- A is default resting point of each leg.
- B→D foot is in the air
- D→A→B foo is on the ground.
- Δt is the time it takes to travel from one point to the next.



INTERSTATES