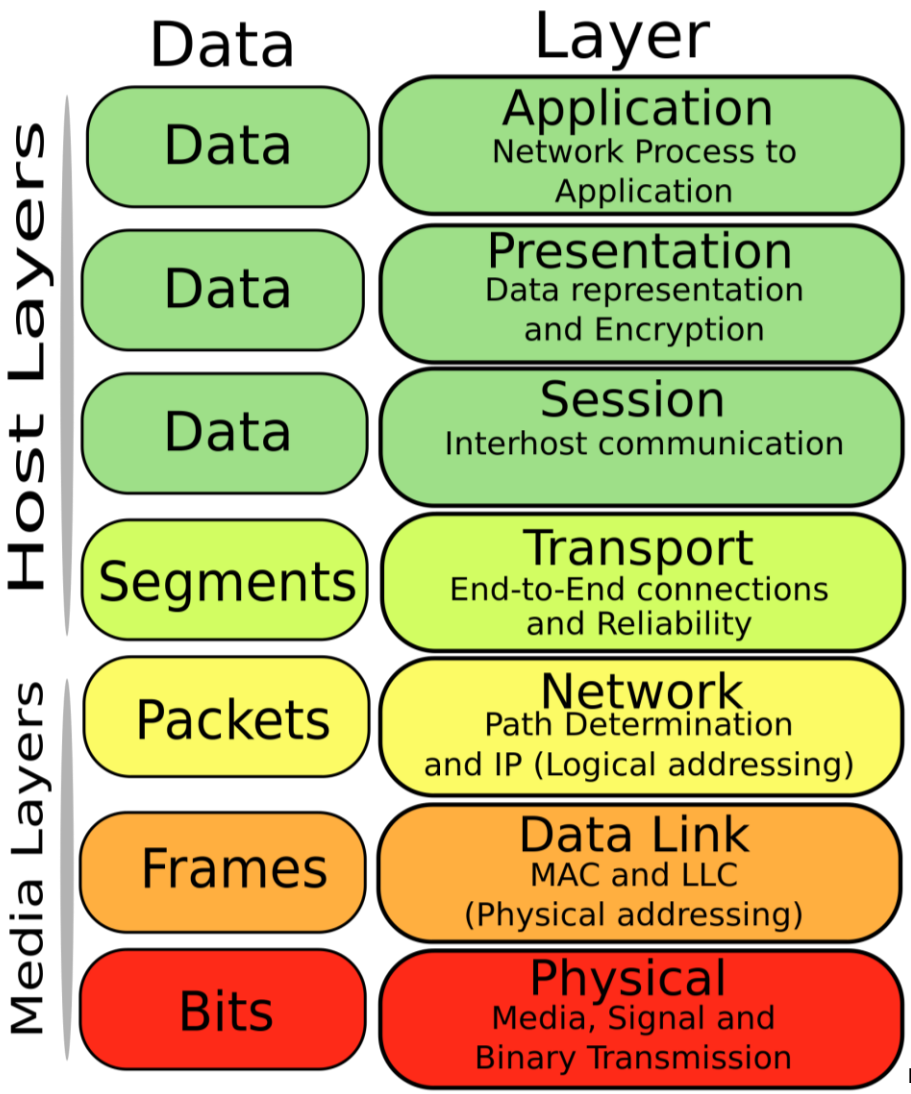
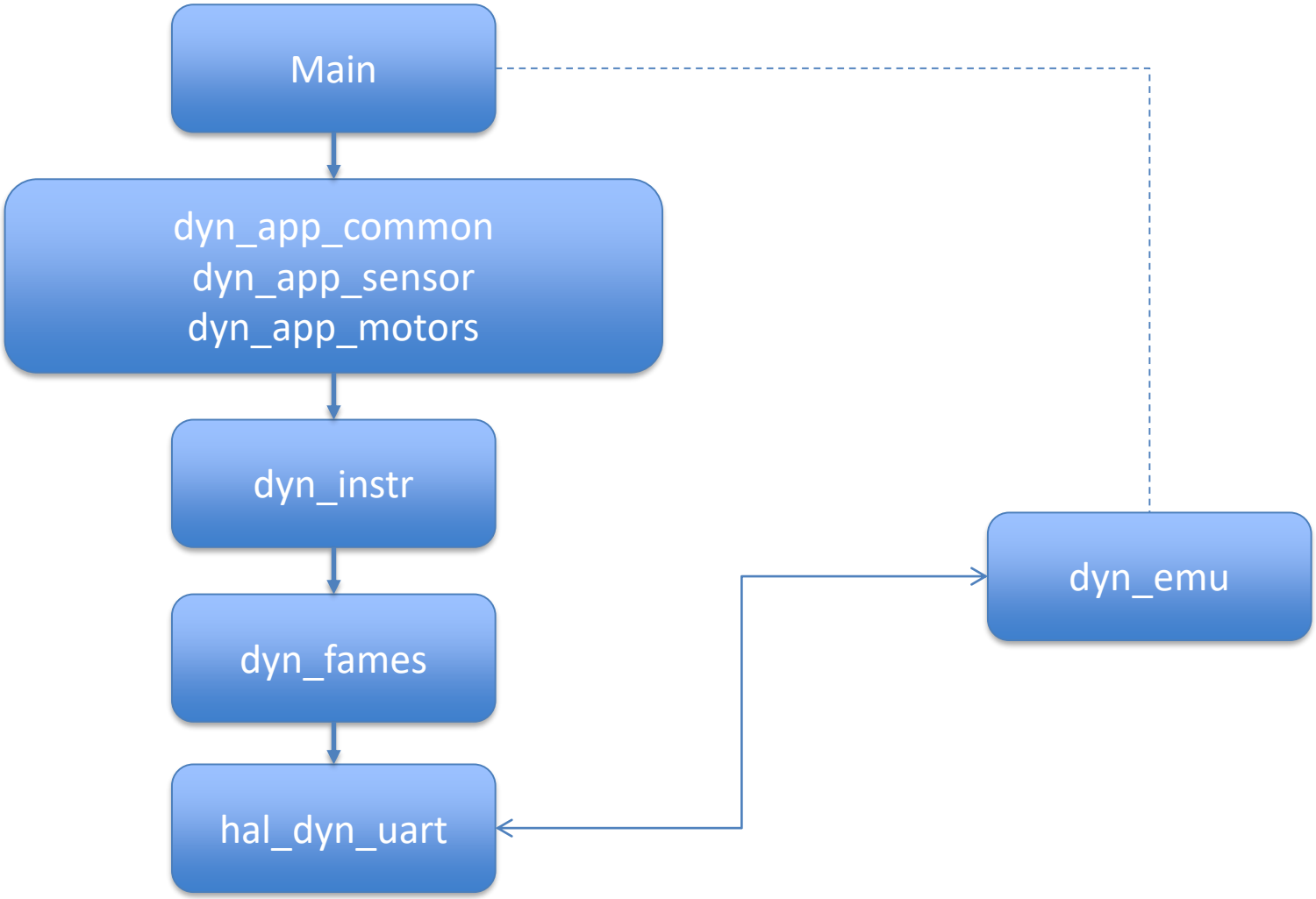
UNIVERSITAT DE BARCELONA

OSI Models



UNIVERSITAT DE BARCELONA

Estructura P4 – No presencial



Motors – Endless turn

If both values for the CW Angle Limit and the CCW Angle Limit are set to 0, an Endless Turn mode can be implemented by setting the Goal Speed. This feature can be used for implementing a **continuously rotating wheel**.

6(0X06)	CW Angle Limit(L)	RD,WR	0(0x00)
7(0X07)	CW Angle Limit(H)	RD,WR	0(0x00)
8(0X08)	CCW Angle Limit(L)	RD,WR	255(0xFF)
9(0X09)	CCW Angle Limit(H)	RD,WR	3(0x03)
10(0x0A)	(Reserved)		0(0x00)

Goal Speed Setting

BIT	15~11	10	9	8	7	6	5	4	3	2	1	0
Value	0	Turn Direction	Speed Value									

Turn Direction = 0 : CCW Direction Turn, Load Direction = 1: CW Direction Turn

32(0X20)	Moving Speed(L)	RD,WR	0
33(0X21)	Moving Speed(H)	RD,WR	0
34(0X22)	Torque Limit(L)	RD,WR	[Addr14] value

Mov_speed_L = speed & 0xFF
Mov_speed_H = ((direction << 2) & 0x04) | ((speed >> 8) & 0x03)

Motors

Funcions per moure el robot. Per exemple endavant, endarrera, endavant dreta, endavant esquerra, gir dreta, gir esquerra

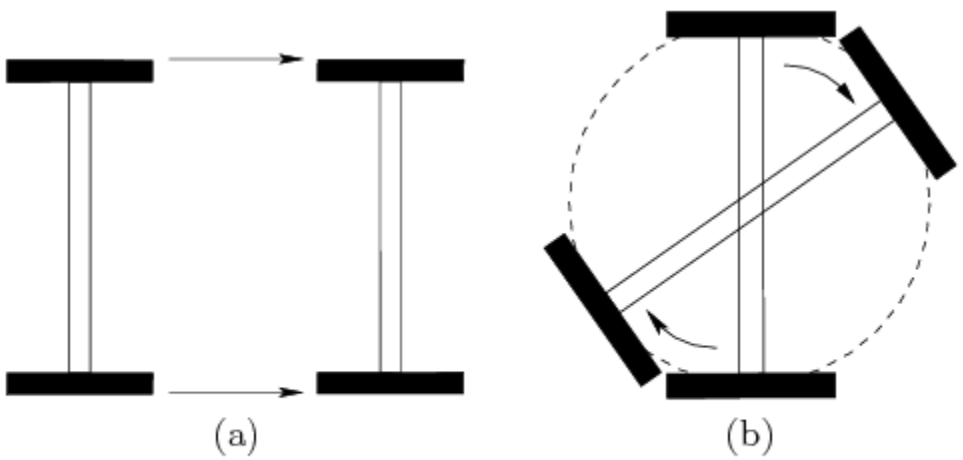


Figure 13.3: (a) Pure translation occurs when both wheels move at the same angular velocity; (b) pure rotation occurs when the wheels move at opposite velocities.

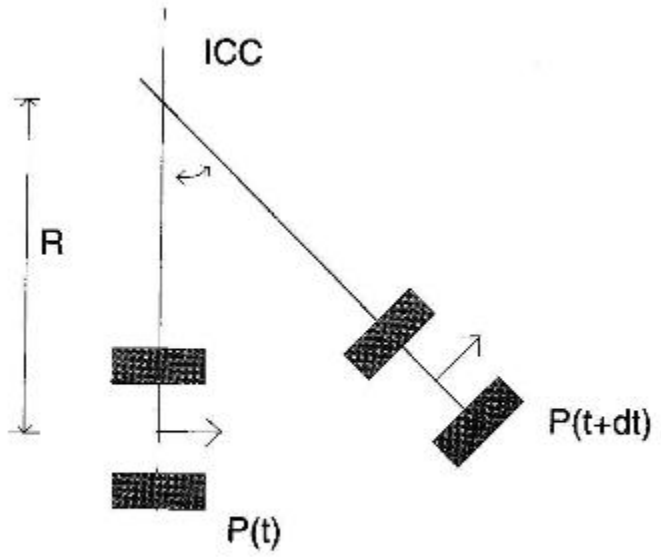


Figure 2: Forward kinematics for differential robot

Sensors – Registres

- **Infrared Sensor Data (Left/Center/Right)**
- Luminosity (Left/Center/Right)
- Sound Detected Count
- Buzzer