

Prototyping workshop on a Saturday morning

Dina Zimmermann @ CERN IdeaSquare



The power of prototyping



The power of prototyping





Linear actuators

Belt

Mechanical
brake



SPECIFICATIONS

DIMENSIONS

Core Data
 Position Rear Motor
 Wheel Diameter (Inch) 26/27.5
 Construction Gear drive
 Rated

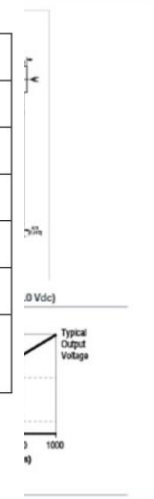


A. The definition for each wire:

Voltage DC36V		Current limit			limit speed: 25 Km/h		load weight: 75Kg		0.2mm ²	color
wheel size (inch)	out put power (W)	current with no load (A)	rotating speed with no load (r/min)	rated speed (r/min)	rated current (A)	torque (N.m)	efficiency (%)	PAS		
20	140	<1.4	300±8	280±8	<8.6	> 5.6	≥80	1:1	0.2mm ²	blue
	160	<1.4	300±8	275±8	<9.5	> 6.8	≥80	1:1	0.2mm ²	green
	180	<1.4	300±8	270±8	<10	> 8.8	≥80	1:1	0.2mm ²	yellow
26	140	<1.25	245±8	215±8	<8.2	> 7	≥80	1:1	0.2mm ²	red
	160	<1.25	245±8	210±8	<9.3	> 8	≥80	1:1	0.2mm ²	black
	180	<1.25	245±8	205±8	<10	> 9	≥80	1:1	0.2mm ²	white
28	140	<1.0	175±8	175±8	<7.8	> 7.6	≥80	1:1		
	160	<1.0	175±8	170±8	<9	> 9	≥80	1:1		
	180	<1.0	175±8	165±8	<10	> 10.8	≥80	1:1		



9pins



IP IP A3
 Certifications ROHS / CE
 Salt Spray Test 96
 Standard(h)

Dimension WR 73.8 mm
 Dimension OLD 135 mm

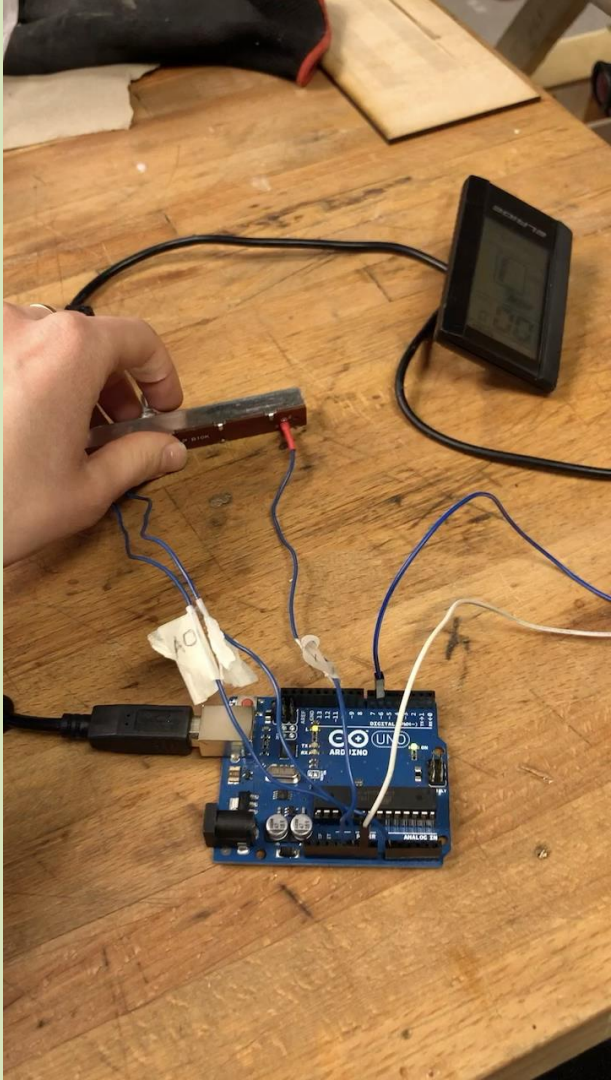
oltage in proportion to how much magnetic force (gauss) to ding on throttle or magnet position. And may be produced by t will be at 2.5 vdc. Where it will be pulled down to 1 vdc with 5.0 vdc.)

Lines of Force

Mag

Con
 Curre

P-type
 Semiconduc
 Hall Eleme



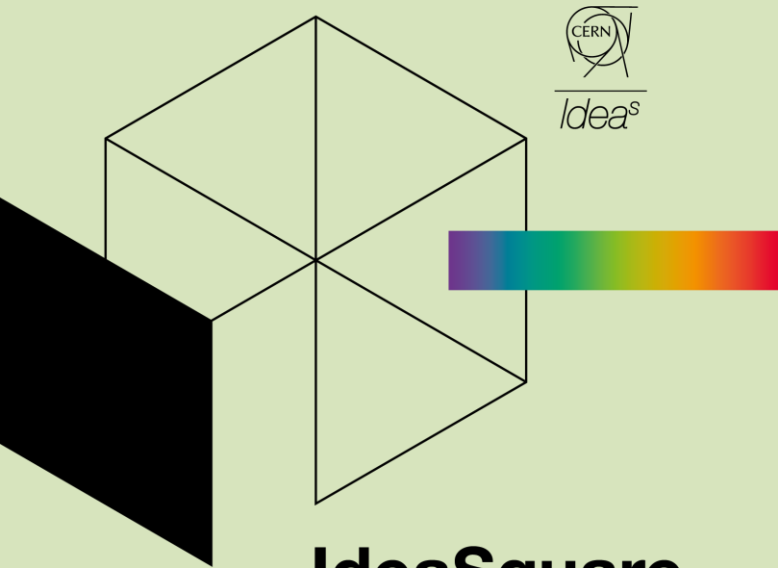
WHY IS IT
ALWAYS THINKING



NOT SURE IF I'M A CRITICAL
THINKER

OR
JUST OVER-THINKING IT





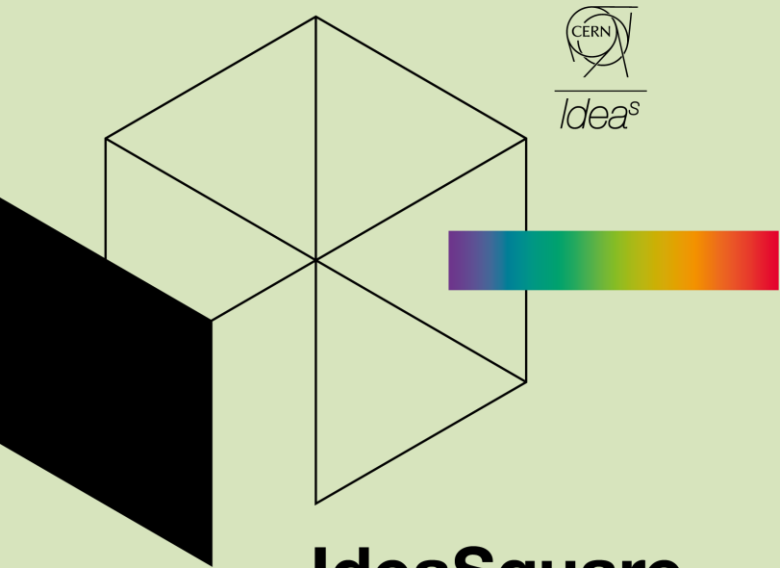
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What is prototyping?

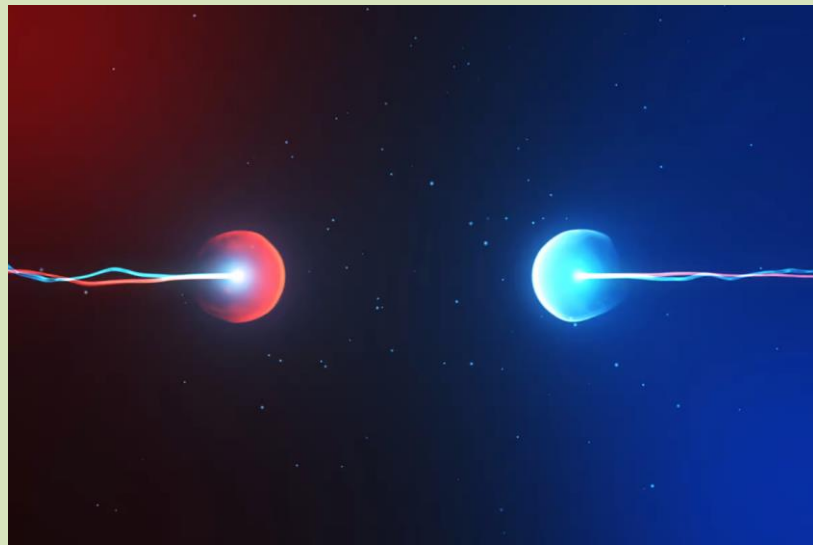
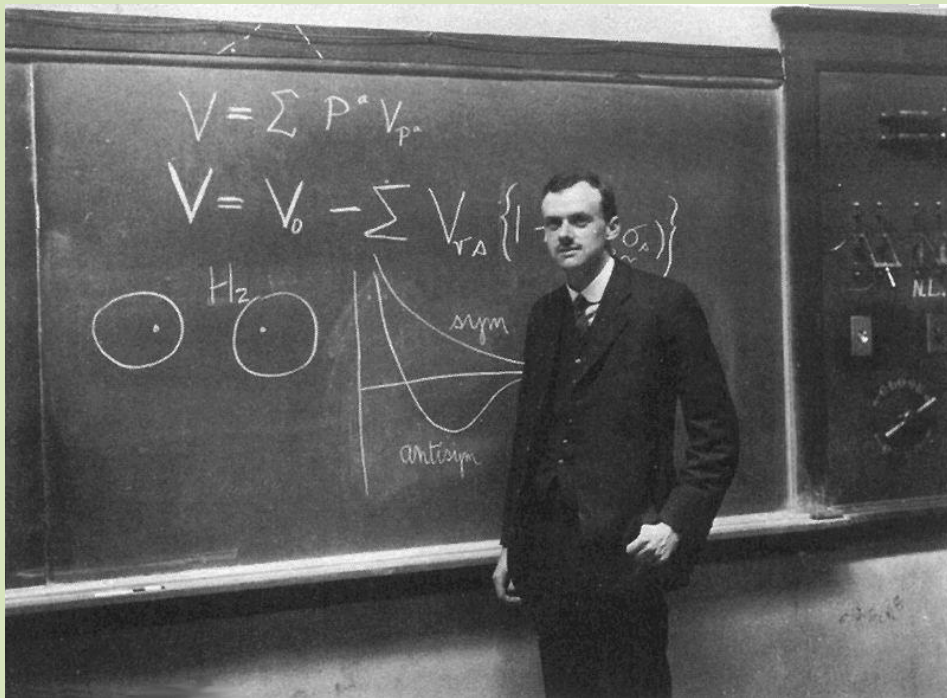
If something helps you **communicate**, **test**, **validate**, **interact**, or **explore** your idea and make it tangible - it is a prototype.

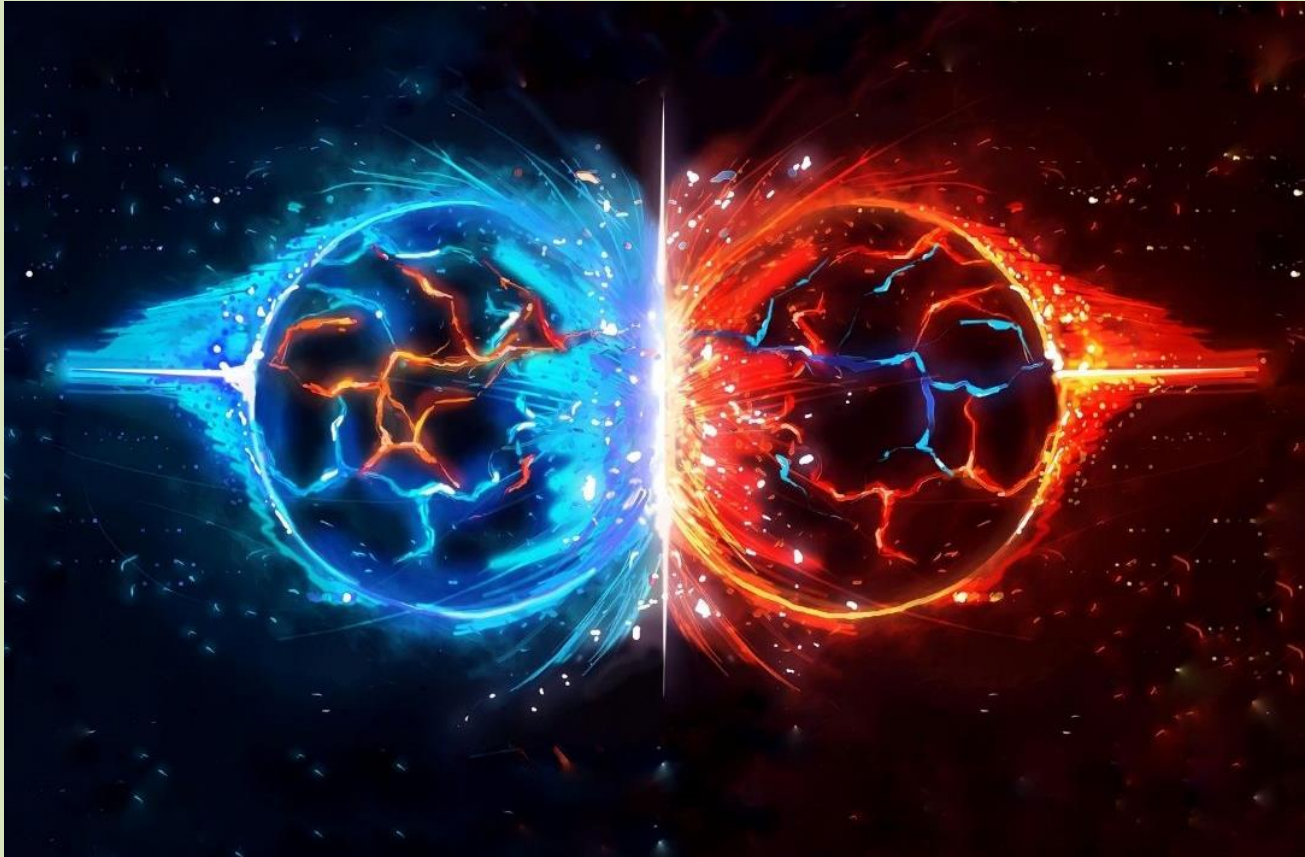


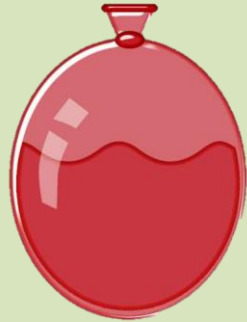
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Today's challenge:

The Antimatter Anti-Annihilator







Antimatter

3 m



**You have 10 minutes to
build the Antimatter
Anti-Annihilator**



Matter

Iterating, iterating, iterating

