Term Project

ULTRA-SONIC WAVE RADAR

초음파 레이더

PERFORMED BY

노준호 & 주성민

01

INTRO

A. TEAM NAME
B. TEAM ROLE
C. PROJECT SCHEDULE

01 INTRO

A. TEAM NAME

GAM-Z

01 INTRO

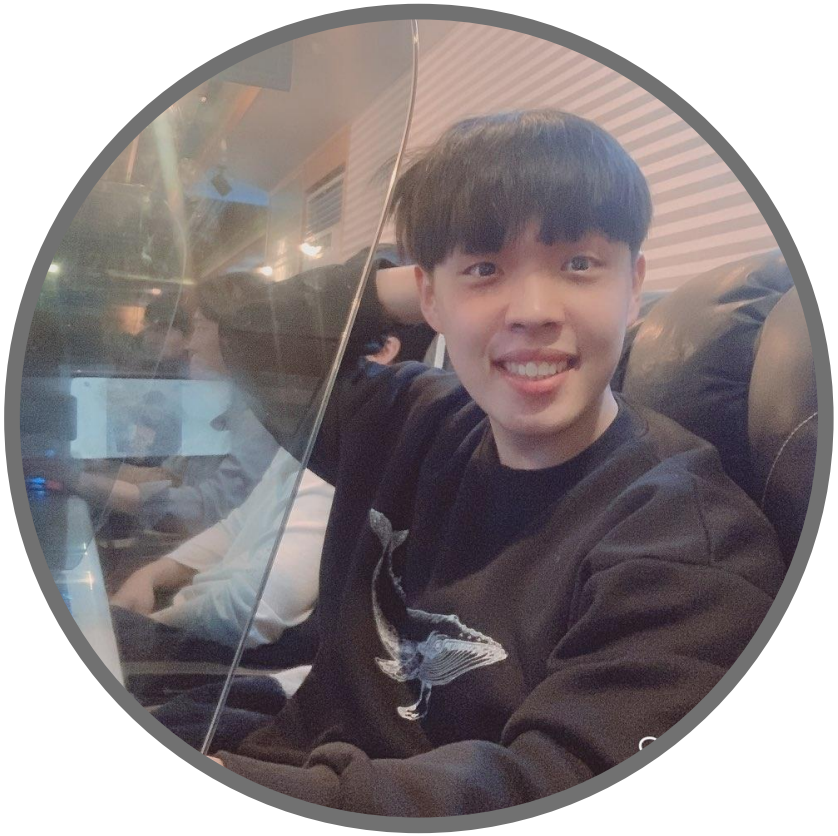
B. TEAM ROLE

- **Cooperation**
  A. Radar operation Algorithm
  B. FPGA (Rework Driver)

- **Personal Tasks**
  A. Data Frame, Print Screen
  B. Screen Brightness Control
  C. Detection &Alarm
  D. Error Correction
  E. Make a Presentation

01 INTRO

B. TEAM ROLE

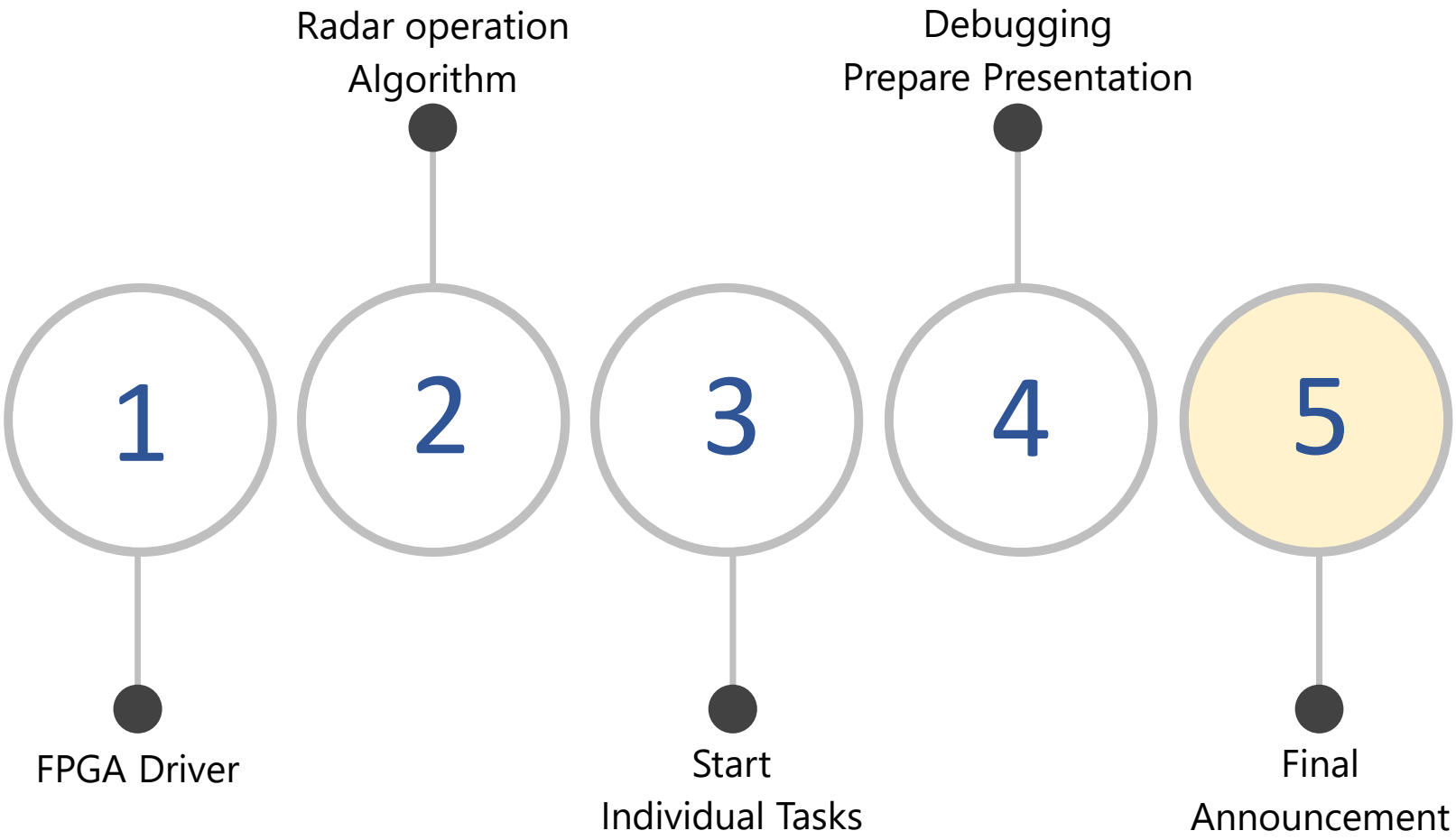


- **Cooperation**
  A. Radar operation Algorithm
  B. FPGA (Rework Driver)

- **Personal Tasks**
  A. Design & Optimization
  B. Touch-Event Handling
  C. Radar Realization
  D. PWM Control
  E. Multi Process Programing

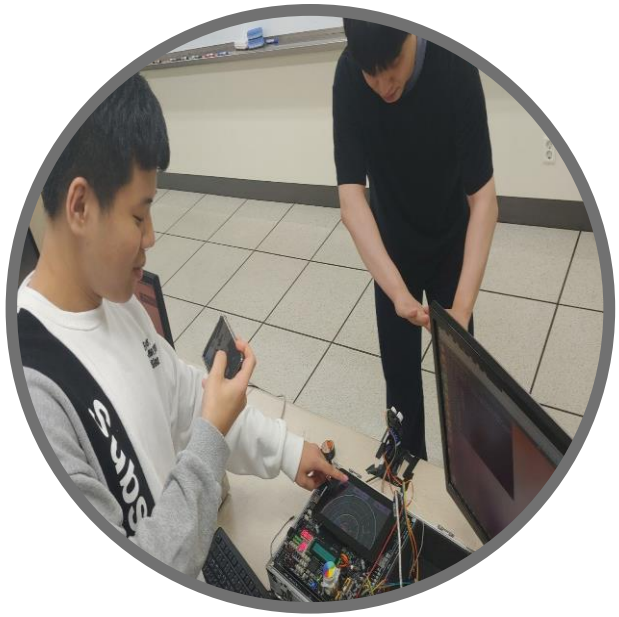
01

INTRO
C. PROJECT SCHEDULE



01 INTRO

C. PROJECT SCHEDULE



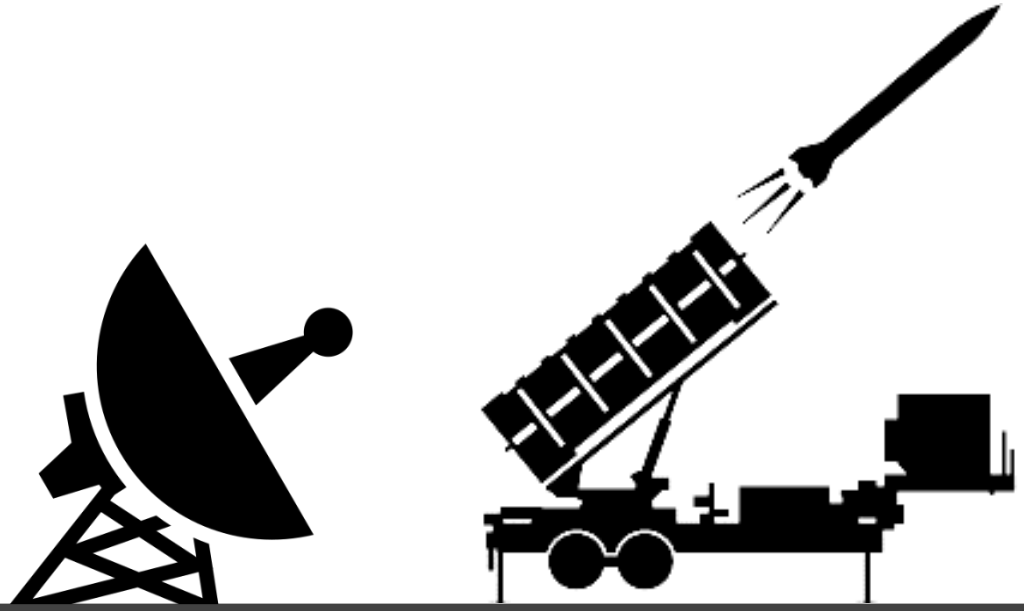
ABOUT PROJECT

02

A. NECESSITY
B. DIFFERENCE
C. MODULE
D. SYSTEM

02 ABOUT PROJECT

A. NECESSITY



02 ABOUT PROJE

A. NECESSITY

국방/외교

“AESA레이더 현재 기술수준 미국의 75%”

최신기사

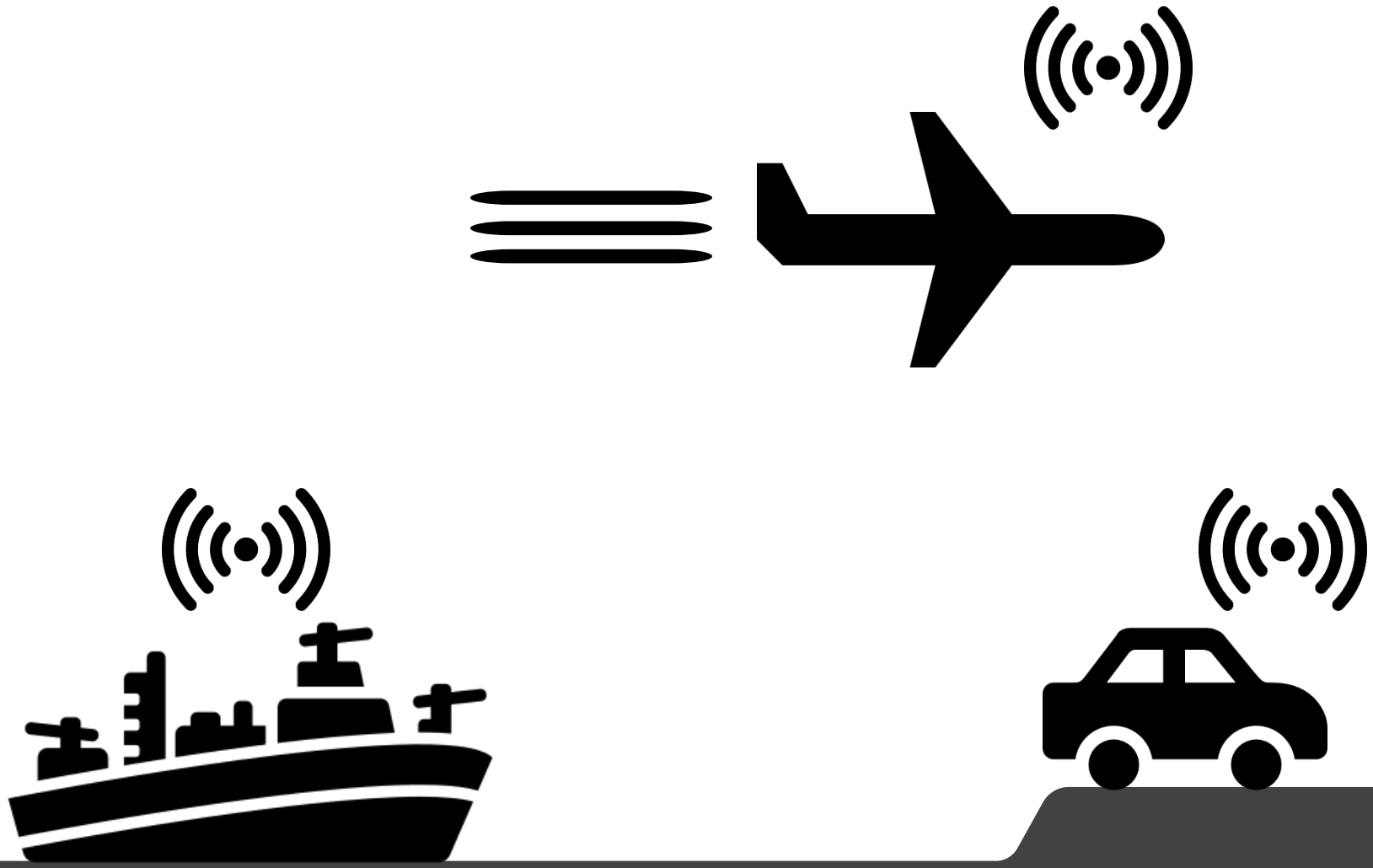
한국 레이더체계 기술 수준, 세계 12위 중진국권(종합2보)

02 ABOUT PROJECT

A. NECESSITY

02 ABOUT PROJECT

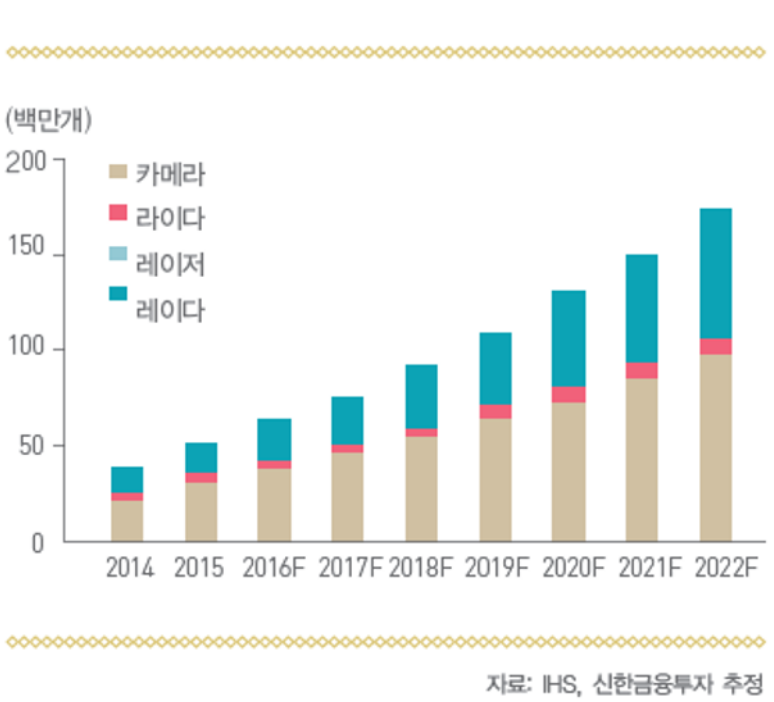
A. NECESSITY



02 ABOUT PROJECT

A. NECESSITY

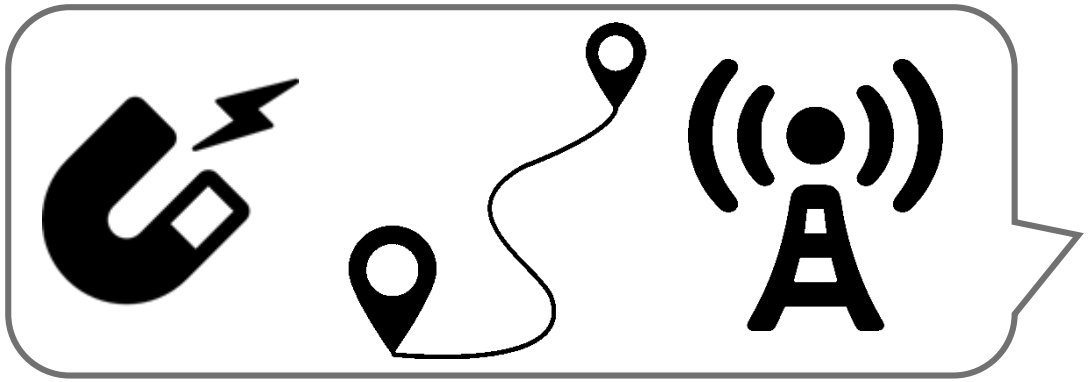
Overall rank	Country	Total score	Policy and legislation		Technology & innovation		Infrastructure		Consumer acceptance	
			Rank	Score	Rank	Score	Rank	Score	Rank	Score
1	The Netherlands	27.73	3	7.89	4	5.46	1	7.89	2	6.49
2	Singapore	26.08	1	8.49	8	4.26	2	6.72	1	6.63
3	United States	24.75	10	6.38	1	6.97	7	5.84	4	5.56
4	Sweden	24.73	8	6.83	2	6.44	6	6.04	6	5.41
5	United Kingdom	23.99	4	7.55	5	5.28	10	5.31	3	5.84
6	Germany	22.74	5	7.33	3	6.15	12	5.17	12	4.09
7	Canada	22.61	7	7.12	6	4.97	11	5.22	7	5.30
8	United Arab Emirates	20.89	6	7.26	14	2.71	5	6.12	8	4.79
9	New Zealand	20.75	2	7.92	12	3.26	16	4.14	5	5.43
10	South Korea	20.71	14	5.78	9	4.24	4	6.32	11	4.38
11	Japan	20.28	12	5.93	7	4.79	3	6.55	16	3.01
12	Austria	20.00	9	6.73	11	3.69	8	5.66	13	3.91
13	France	19.44	13	5.92	10	4.03	13	4.94	10	4.55
14	Australia	19.40	11	6.01	13	3.18	9	5.43	9	4.78
15	Spain	14.58	15	4.95	16	2.21	14	4.69	17	2.72
16	China	13.94	16	4.38	15	2.25	15	4.18	15	3.13
17	Brazil	7.17	20	0.93	18	0.86	19	1.89	14	3.49
18	Russia	7.09	17	2.58	20	0.52	20	1.64	18	2.35
19	Mexico	6.51	19	1.16	17	1.01	17	2.34	19	2.00
20	India	6.14	18	1.41	19	0.54	18	2.28	20	1.91



자료: IHS, 신한금융투자 추정

02 ABOUT PROJECT

B. DIFFERENCE

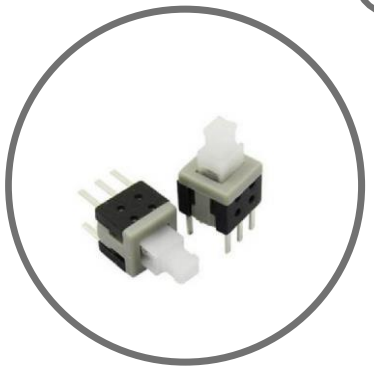


02 ABOUT PROJECT

C. MODULE

Detection

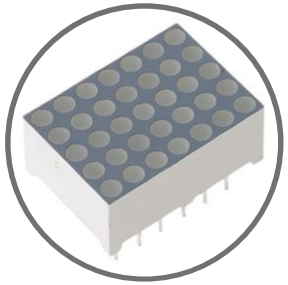
Movement



Controller

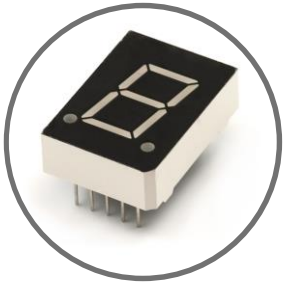
02 ABOUT PROJECT

C. MODULE



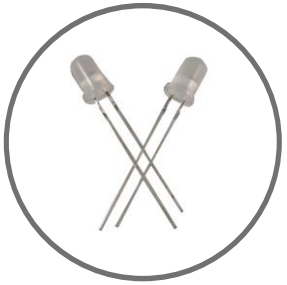
Detecting Direction

Detected Distance



Danger Close Alarm

Show Record Order



02 ABOUT PROJECT

C. MODULE

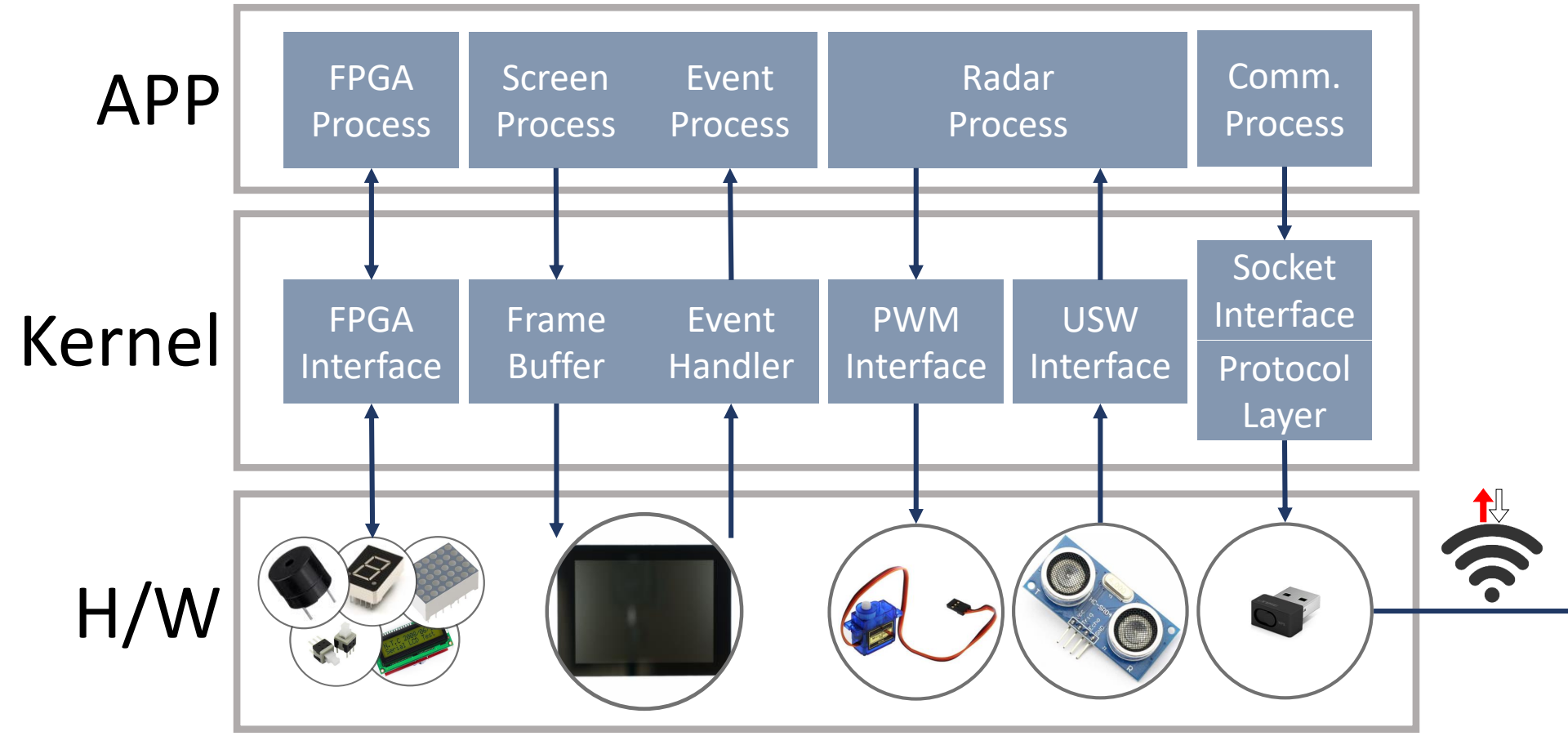
Show Detection Info.
Setting Output

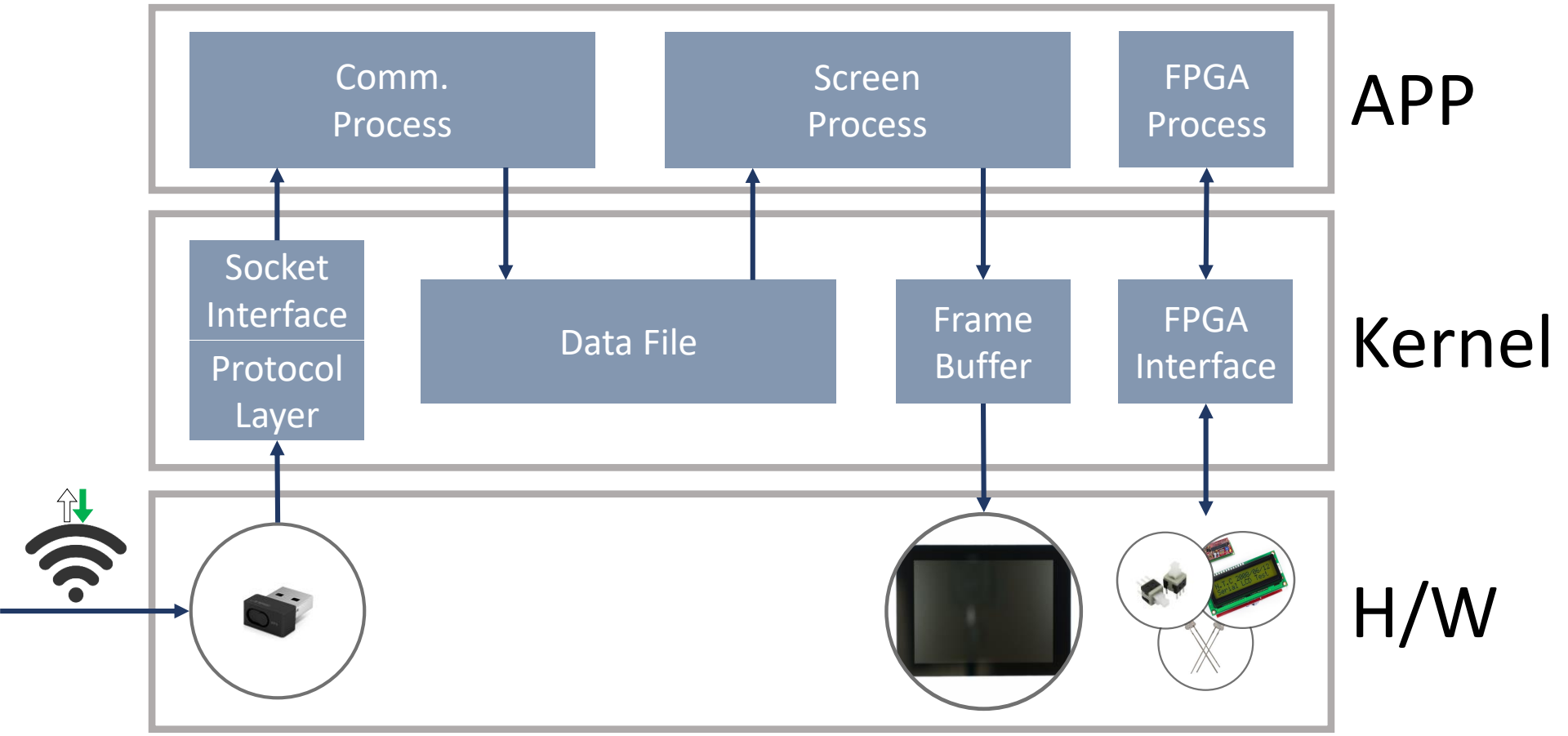
Show Setting Option
Show Data's Time Info.

Data Transmission

02 ABOUT PROJECT

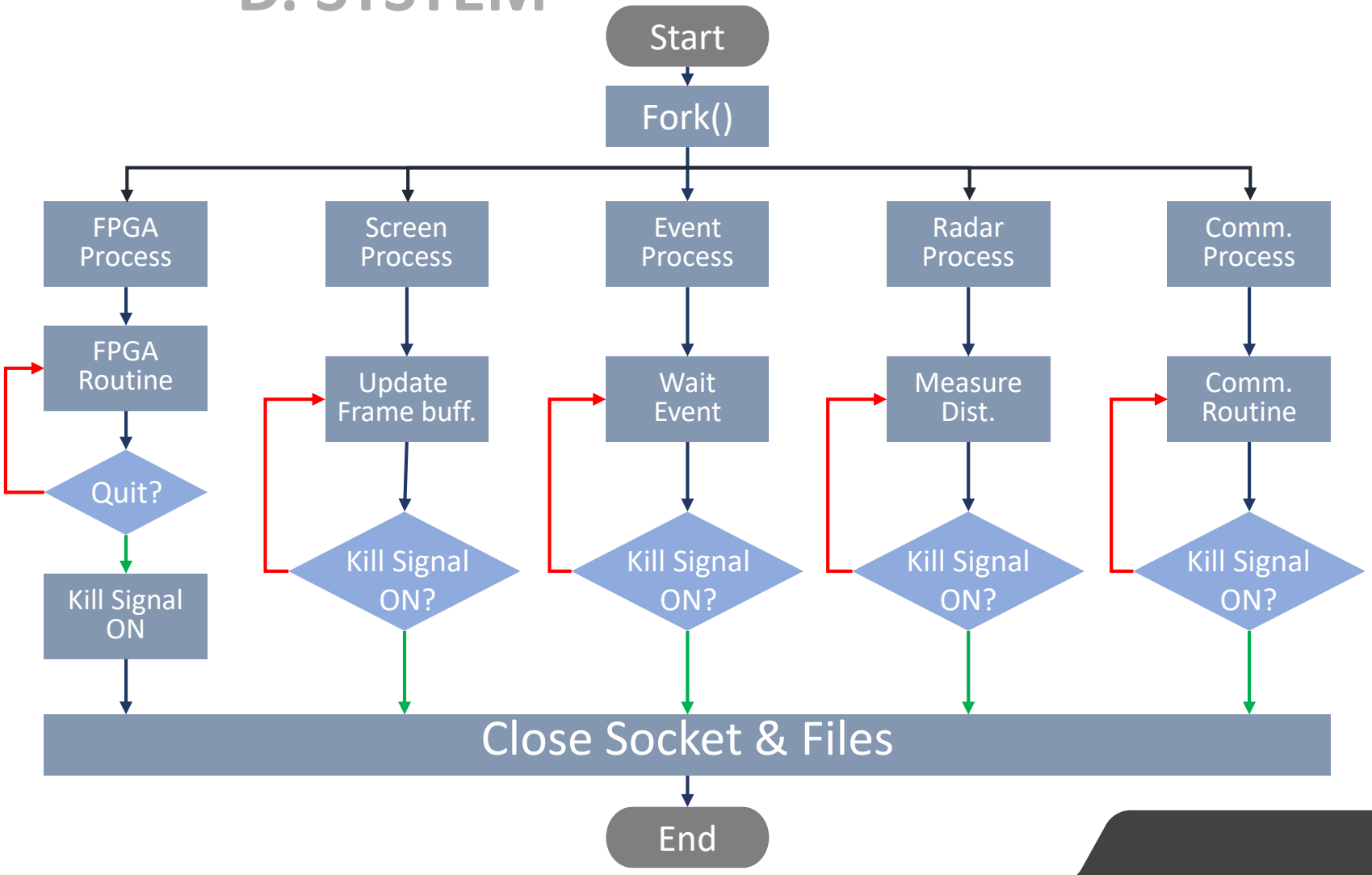
D. SYSTEM




Comm.
Process
Screen
Process
FPGA
Process
APP
Socket
Interface
Protocol
Layer
Data File
Frame
Buffer
FPGA
Interface
Kernel
H/W

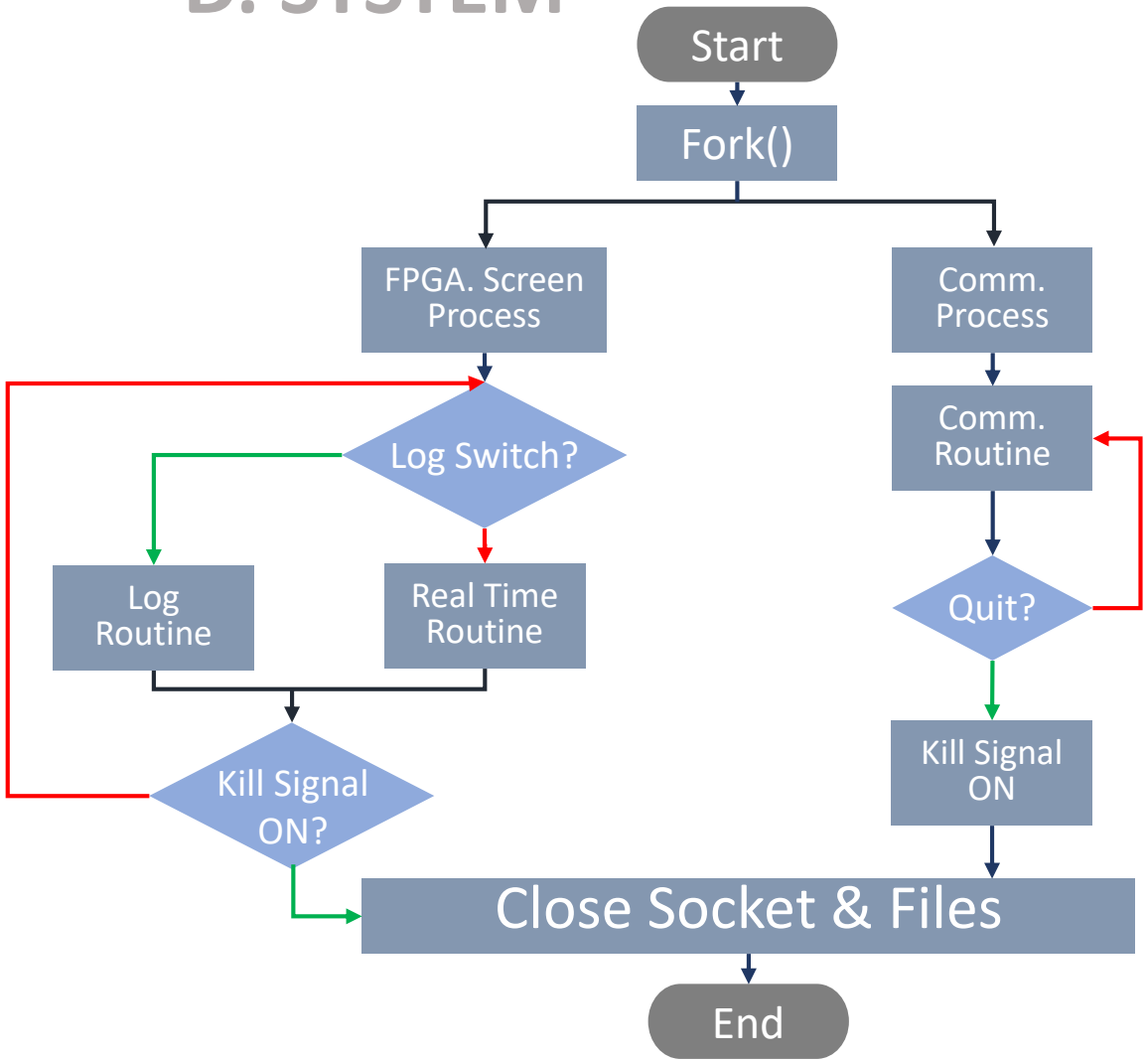
02 ABOUT PROJECT

D. SYSTEM



02 ABOUT PROJECT

D. SYSTEM



03

DEMO FILM

HOW THE RADAR WORKS

03 DEMO FILM

HOW THE RADAR WORKS

https://youtu.be/e_Ej8C35qMA

OUTRO

A. IMPROVEMENT
B. PLAN
C. OPINION
D. EPILOGUE

04

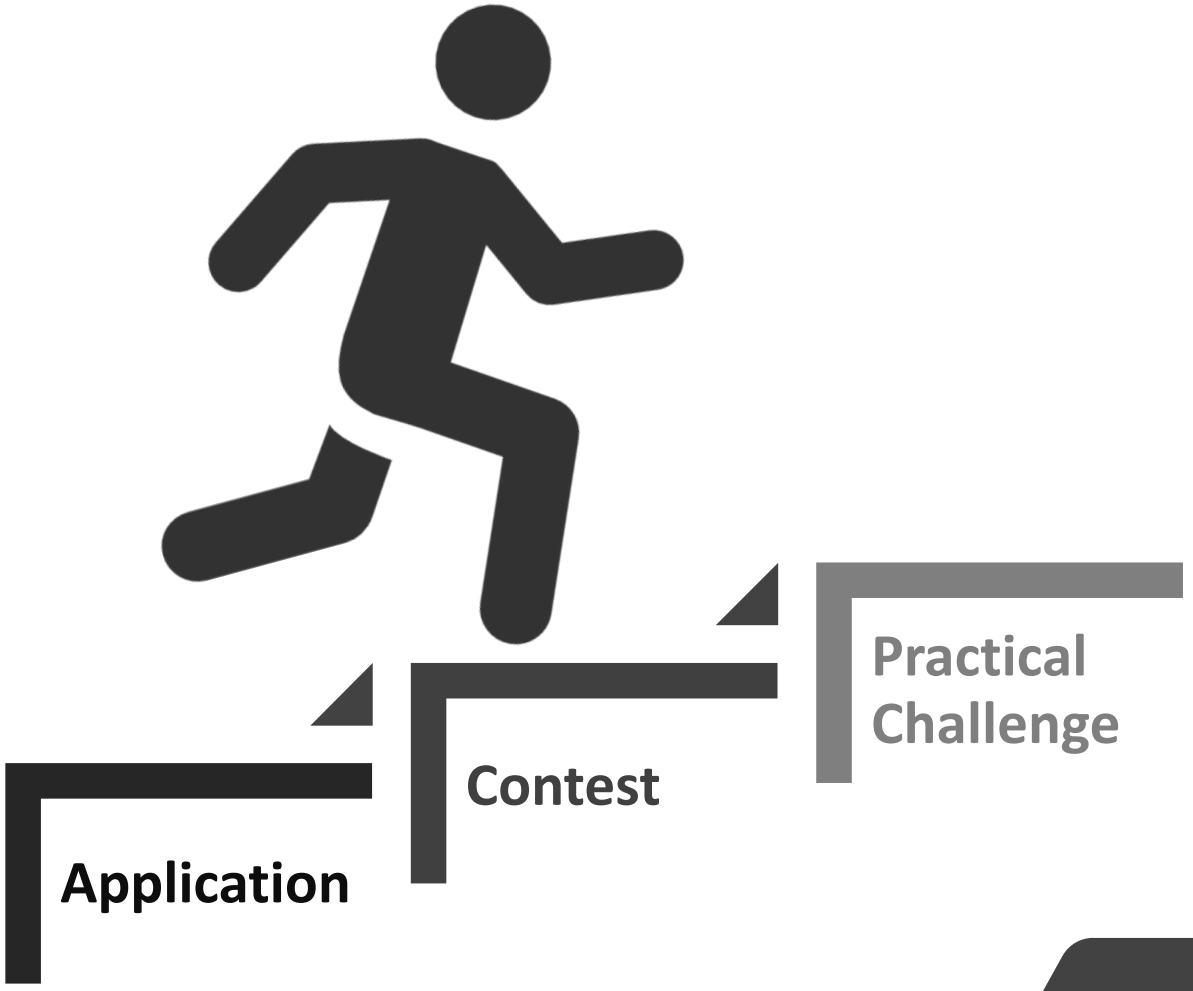
04 OUTRO

A. IMPROVEMENT

1. Speed & Precision
2. Vibration-induced Error
3. Frame Buffer Optimization
4. Two-way Comm.

04 OUTRO

B. PLAN



04 OUTRO

C. OPINION

- Window Environment

  ⬇

  Linux Environment

- Experience Work-Level

- Real Radar

04 OUTRO

D. EPILOGUE

THANKS FOR LISTENING