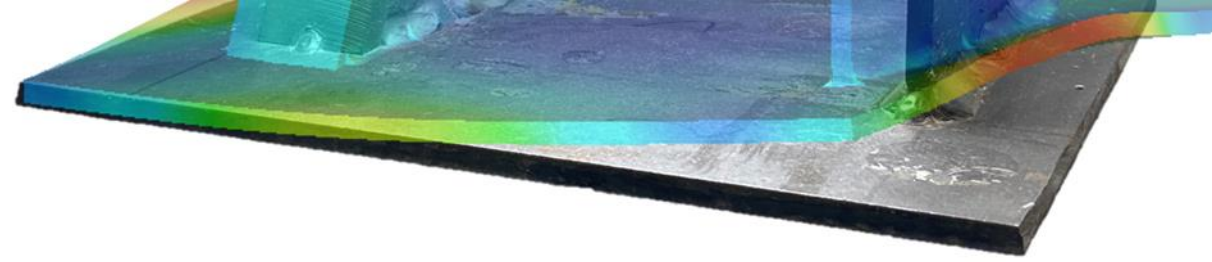


Welding Sequence Visualizer

Software + Hardware

2022-06-06



MANUF AI

Self Introduction

Dr. Jesús R.



Jesús Romero
Founder & CEO

Research & Publication



Research Interests:

Robotics / Artificial Intelligence / Machine Learning / CAE / Artificial vision /

14 – Journal Papers

+20 – Thesis Eng. degree main advisor

Education



Mechatronics PhD.

Osaka University – Joining and Welding Research Institute



Center for Engineering and Industrial Development (CIDESI-CONACYT)



Mechatronics Master Degree

Universidad Autónoma de Nuevo León (FIME-UANL)



Manufacturing Engineering Bachelor Degree

Universidad Autónoma de Nuevo León (FIME-UANL)



IT Technician

Nogales Institute of IT, S. C.



Professional



PDP – Project Engineer Welding Specialist
2012 - 2013 → John Deere Mexico.



PDP – Project Quality Engineer
2011 – 2012 → John Deere Mexico.



OFP – Quality Engineer
2008 – 2011 → John Deere Mexico.



Intern
2008 - 2008 → Research Center CIDET UANL.



Intern
John Deere → Feb. 2006 – Feb. 2008

**+8 Years experience
in welding industry**

Solution



Welding Sequence Step by Step



What is the difference from the sequencers on the market?

Low Cost → Manual activation

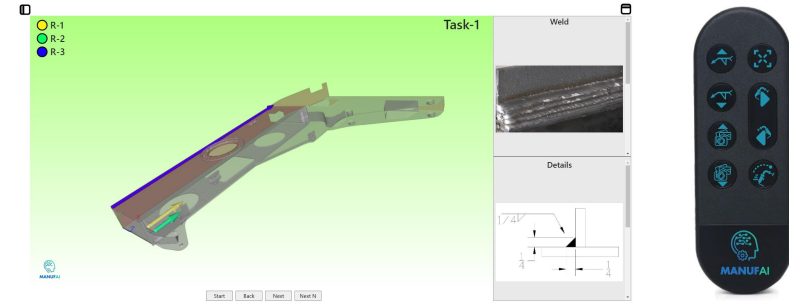


1) The connection to the welding machine is an advantage because with the arc, the sequencer moves forward, and you can track the quantity of beads placed.

However, those cannot react to non-planned task like arcs to fill gaps, tryout for parameters adjustment, etc.

2) High-cost (Software + Hardware) for non-high-volume manufacturing cells

3) Some of them based only in pictures



- 1) Manual activation with custom options for controls
- 2) Low Cost
- 3) Multi-platform - Works on any device with web browser
- 4) Easy to share
- 5) 3D model-based visualization

What is needed?

Html file that works on any device with web browser

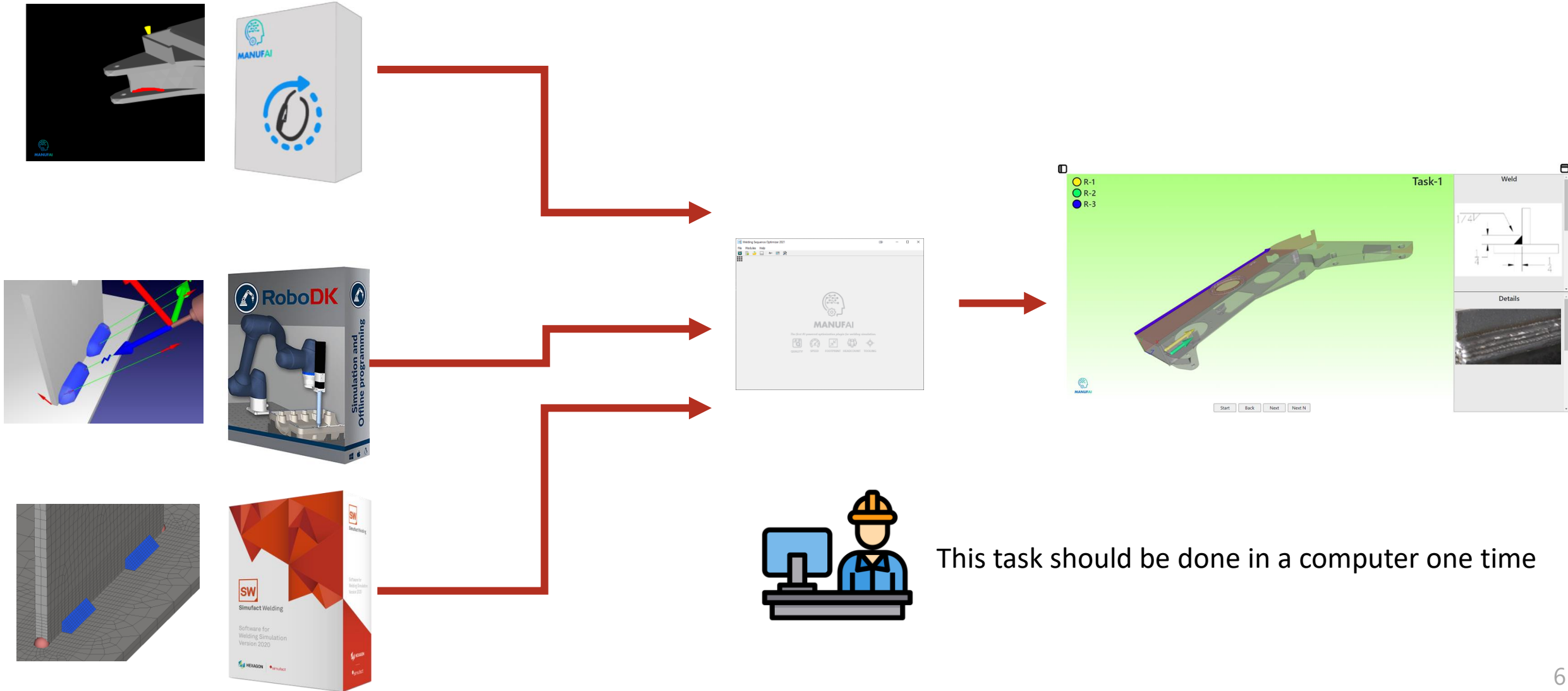


androidtv



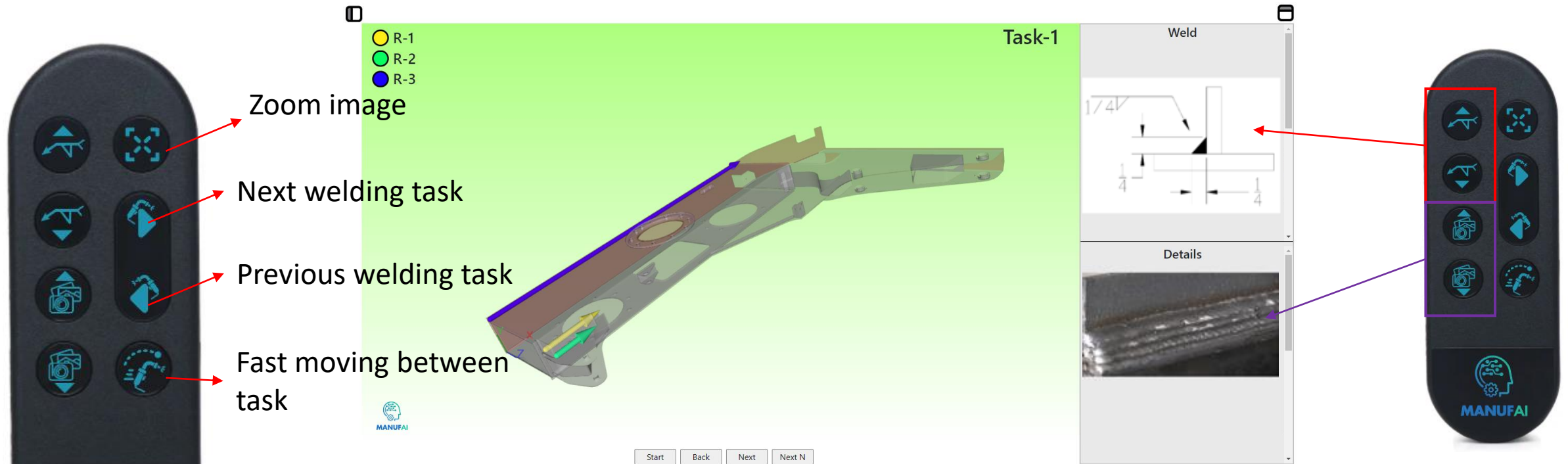
How to create the HTML File?

Use third party software or our own drawing tool for bead drawing



USB/RF Control functions

Optional design – can be customized



Legend:
● R-1
● R-2
● R-3

Task-1

Weld

Details

MANUF AI

Start Back Next Next N

Zoom image

Next welding task

Previous welding task

Fast moving between task



Implementation

@Shopfloor

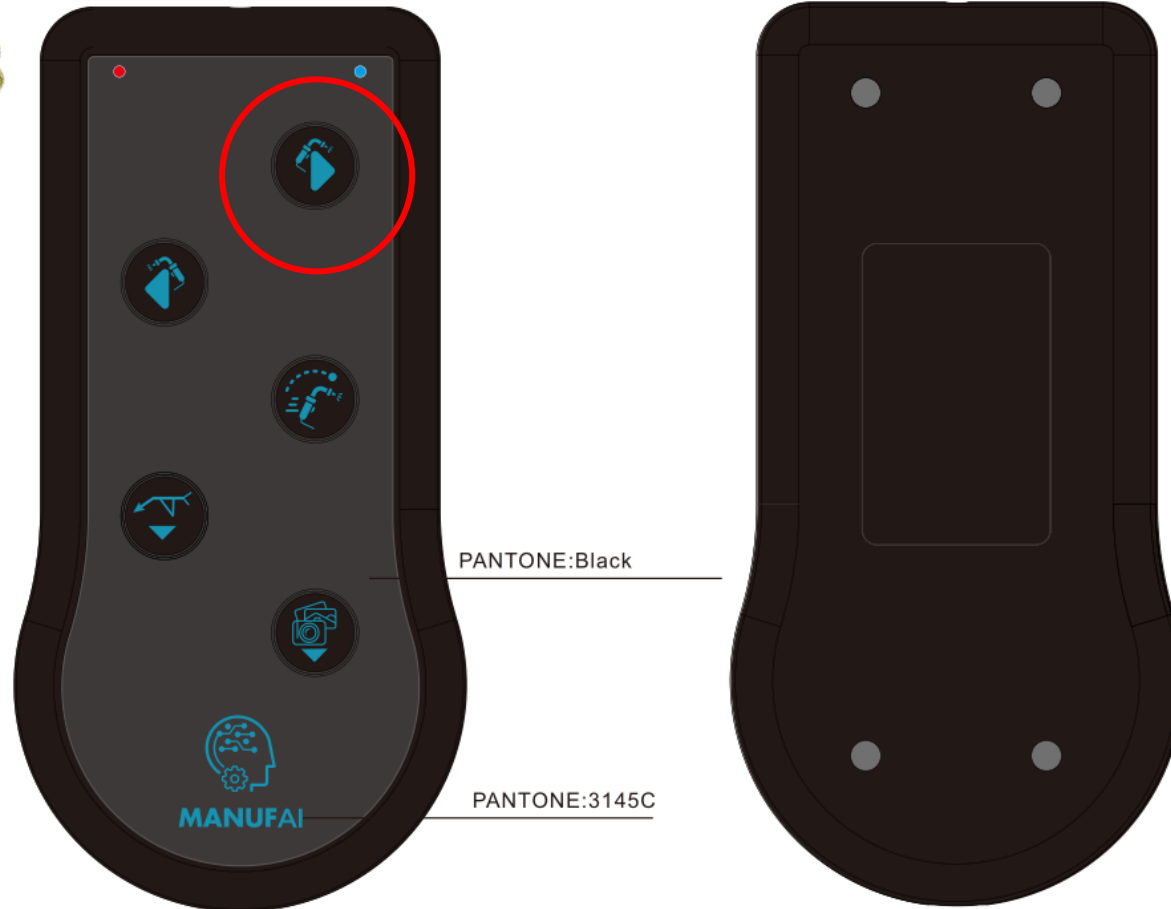


New control - August 2023

Press the button using welder gloves

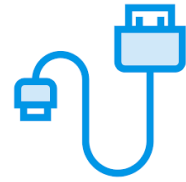


Enough space for pressing the button with safety gloves



Foot pedal for changing the sequence

Coming soon - October 2023



Contact Information

Dr. Jesus Romero



<https://www.facebook.com/MANUF AIMX>



https://www.youtube.com/channel/UC9_Wxbo-TBrwLbBM0pq73eg



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