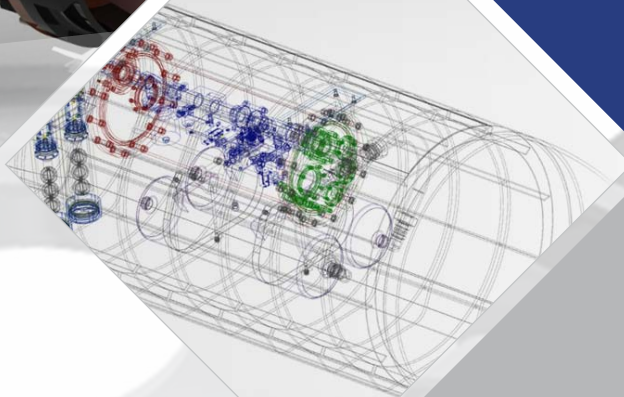
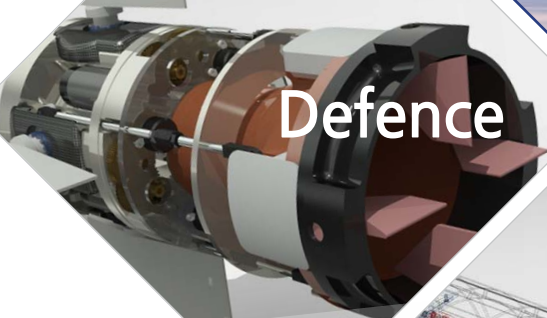




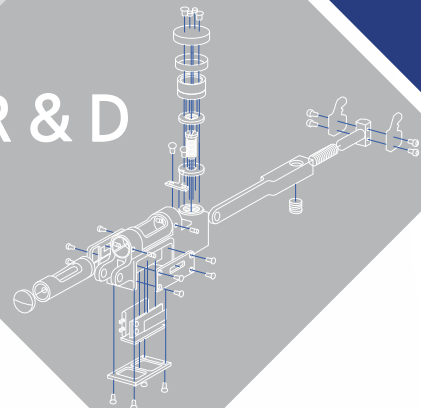
Drone



Defence



R & D



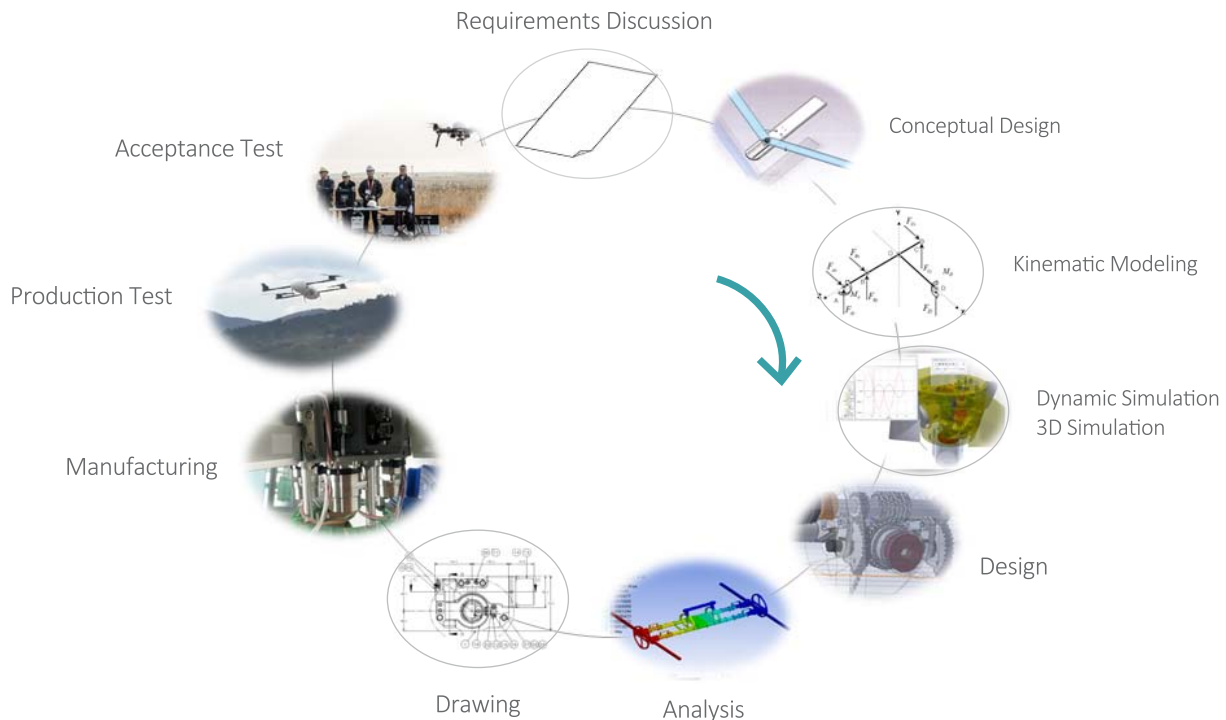
Promise of Edun

**EDUN-ENG**

Just imagine. We make your imagination a reality

## ◦ What We Do

Edun-ENG prides on providing complete vertical integration of services. We provide various services that from napkin sketches, conceptual design, discussions to manufacturing.



## ◦ Business Area

### Unmanned System

Edun-ENG is a global leader in the design, development and manufacture of unmanned systems. Edun-ENG supports a wide range of advanced unmanned aerial vehicles (UAV), unmanned ground vehicles (UGV) and unmanned underwater vehicles (UUV). And we develop/manufacture control boards, machined components and CFRP (carbon fiber reinforced plastics) components for drones on the basis of extensive know-how and knowledge.

### Defence System

Edun-ENG takes charge of providing proper EMA (Electro-Mechanical Actuation) module on satisfying the technical specification and quality standards of missile & military system.

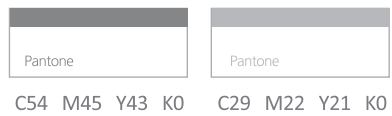
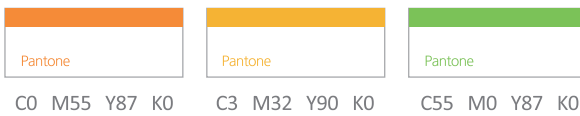
### R&D System

Edun-ENG focuses on Scientist's R&D and military munition related R&D. Also We consistently participate in the nationalization of general R&D systems (military/aerial/industrial).

## • CI & Logo



"Edun" is a traditional Korean word meaning "Nice".  
Edun-ENG keeps the promise of 'Edun Technology'.  
Creative imagination is strong motivation of Edun Technology.  
Edun Technology always supports you and your passion.



## • Patent



Dieless forming apparatus



Apparatus for protecting a sight of armoured fighting vehicle



Apparatus for cleaning rack gear of rack-pinion type transfer instrument



Parachute module for drone

## ◦ UT-03 Management\_Drone System

This product was developed as a specialized product for maritime environment with efforts of PNU DRONE consortium companies. It was made with requirements of the Busan Regional Office of Oceans and Fisheries and technological support of the Korea Aerospace Research Institute that aids national research task of the Ministry of Science and ICT.

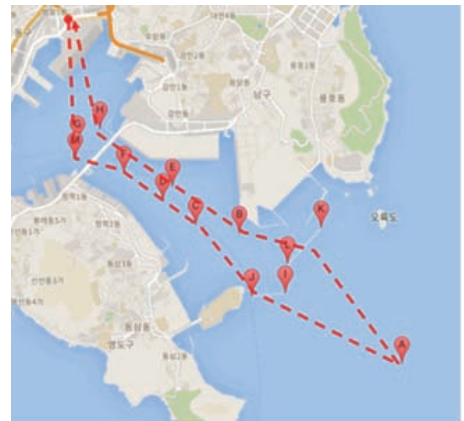
### Features

- Having front and rear pairs of tiltable motor-mount-shaft
- Water drop resistant body
- EO/IR or Night Vision (optional mounting)
- Commercial mobile communication (LTE) based system
- Full autonomous flight function
- Parachute, Buoyance (optional mounting)
- Wind tolerance : over 10m/s

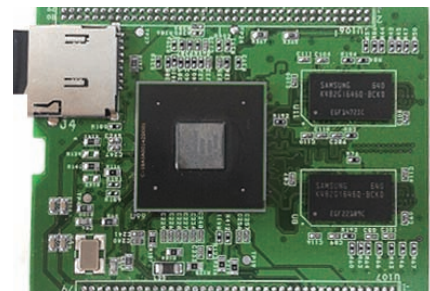
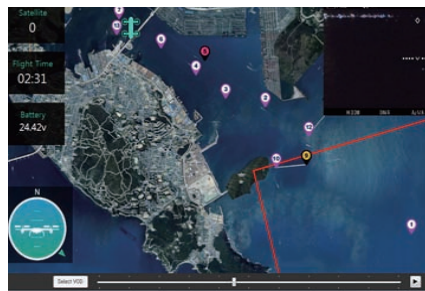
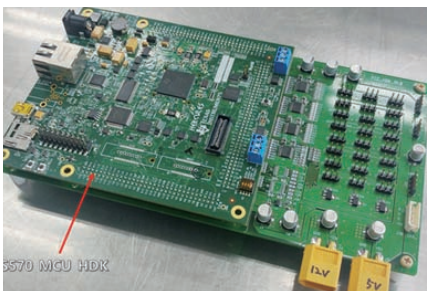


### Specifications

- Aircraft type : Quad-Tilt-Prop
- Maximum Take Off Weight : 25kg
- Endurance : 40min.
- Payload : 2~3kg
- Operating range : 20km
- GCS : (optional)

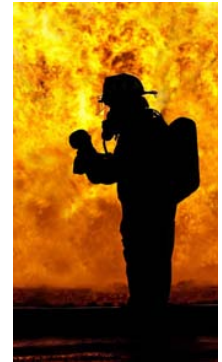


## ◦ FCC / GCS / Communication module

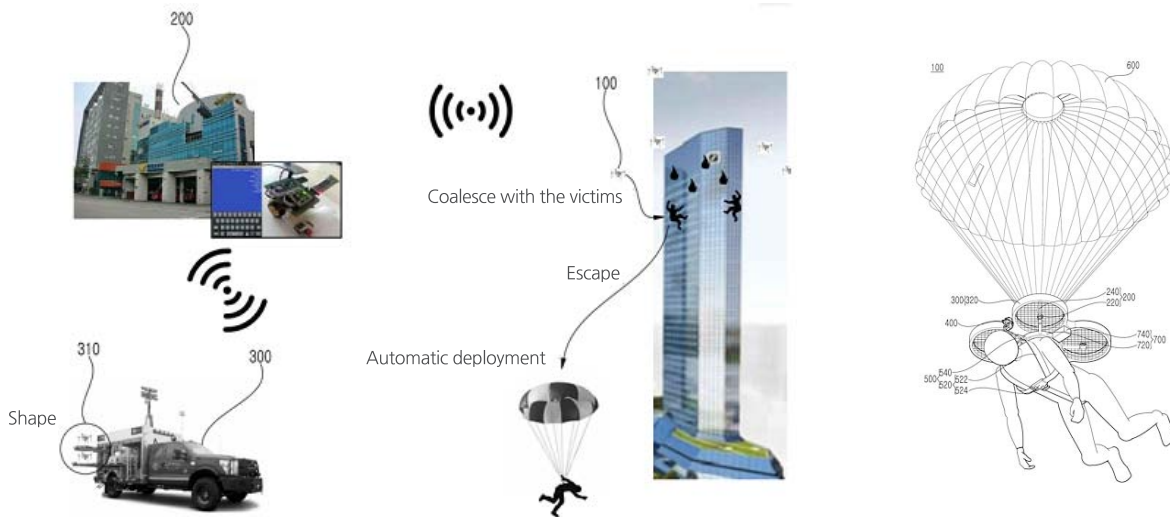


## ◦ EB-01 Escape Drone System

It is not easy to evacuate or escape from the scene of a fire in high-rise building. And it's hard to use evacuation equipments those are equipped the building, because people are embarrassed when a fire breaks out. They will be left defenseless in high-rise building if there is no outside help. In addition, when a fire breaks out the high-rise building, people try to escape through windows to avoid flame or smoke, and it directly leads to loss of human lives.



In near future, you will save your life from a disastrous fire!

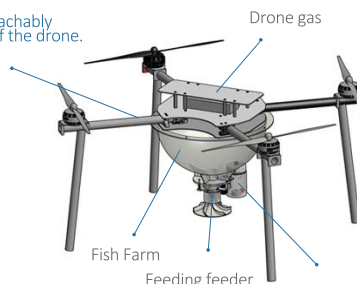


## ◦ MF-01 Fish farm management Drone

Drone for fish farm management that can feed fish and shellfish with automatic feeding device. It's a drone that manages fish farm by feeding fish periodically and collecting seawater in littoral sea.

- Drone gas suitable for marine environment
- GCS
- EO Camera
- RF based system
- Full autonomous flight function
- Feeding System

The feed bottle is detachably secured to one side of the drone.



Watering (+ thermometer)  
Watering or Thermometer  
Unloading or lifting device is not shown

# Drone Components

## ◦ Dronesave™ Drone Parachute System

Drone falling down due to system breakdown or communication error may crash to the ground in a very high speed.

It proves its value when there is a concern of hurting people or when your drone equipped with expensive equipment falls.

This product is a complete removal of the power / signal interface and the Flight Controller (FCC), and only a simple mechanical installation procedure is required at the top of the drone for operation.

It is a safety device for the drone that detects the fall of the drone and automatically activates the parachute canopy to reduce the fall speed.



- Self-deploying(with no electric connections)
- Applicable Aircraft type: VTOL, Multicopter
- Applied aerodynamic weight: 2-9kg
- Attachment required to mount on aircraft (available)



## ◦ Smart battery

Smart batteries for high performance drone

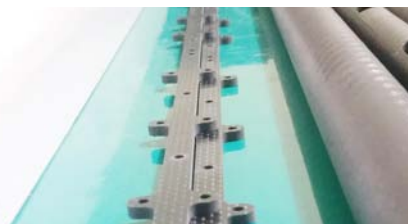
- Charging & Discharging control
- CAN Communication



## ◦ Drone Parts



CFRP structure



CFRP machining parts



Metal Machining parts

## ◦ EMA Electro-mechanical Actuator

Electro-Mechanical Actuation(EMA) Module applied to robot system/aviation system/ guided weapon is used for actuators for precision attack, high impact actuator, launcher and UGV, power transmission, etc.

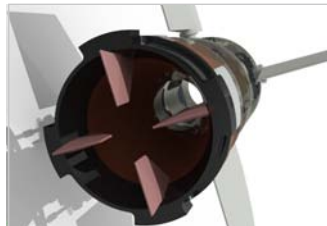
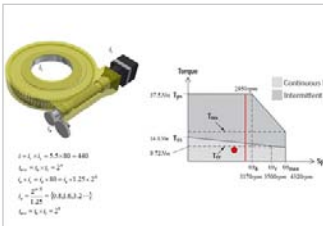
Conceptual design, detailed design, dynamics analysis, 3D modeling and 3D Dynamic Simulation for driving system can be provided.

It includes various work capacity such as Structural Analysis, Performance Analysis and produces highly reliable driving system.



### Support Areas

- ROC or RFP Documents
- Total System Engineering Processor
- Patent Avoidance and Patent Application / Registration

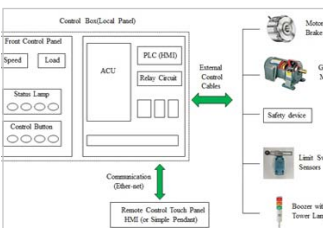


## ◦ Evaluation System

Based on ROC (Required Operational Capability), it supports various basic research, applied research, system development, evaluation and verification system and test evaluation.

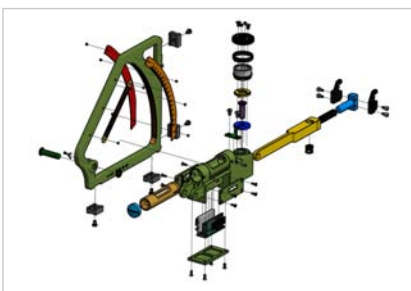
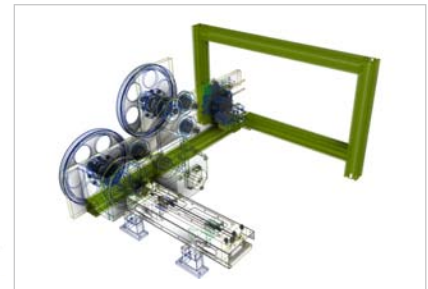
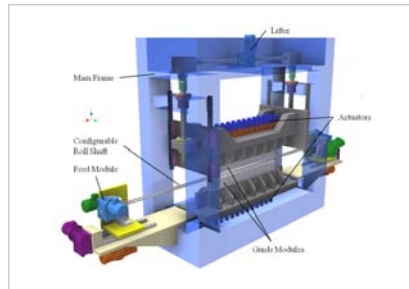
### Support Areas

- Servo System
- Hydraulic/Pneumatic System
- Test Bench
- Wind Tunnel Model
- Under Water Model



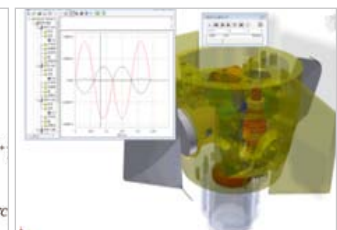
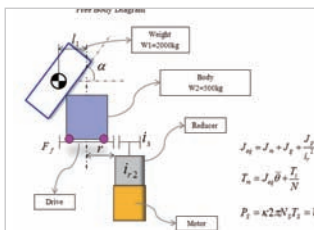
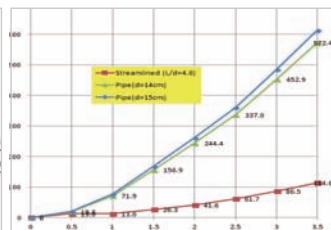
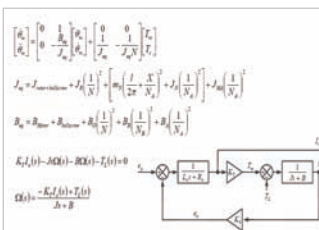
## Design

- Conceptual Design
- Preliminary Design
- Detail Design
- Electric & Electronic Circuit Design
- Performance & Structural Design



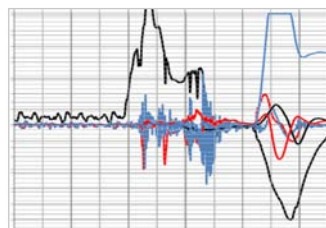
## Analysis / Computation

- Kinematics
- Vibration
- FEA/CFD
- 3D Studio & 3D Dynamic Simulation



## Service

- Prototype Facility
- Mock-up
- 3D Printing
- DAQ / HMI Software
- Test Evaluation Support





## ◦ SHPB Split Hopkinson Pressure Bar System

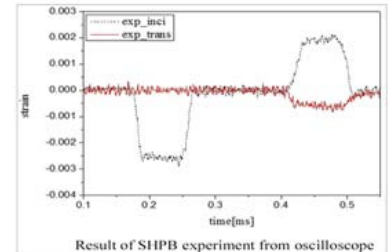
Split Hopkinson Pressure Bar (SHPB) System is used to obtain high strain rate material properties.

The bar is used to impose a dynamic load on a material specimen similar to the load that a material generates during use.

Determining how the material properties change under service loads can yield critical performance data.

Precision-engineered Edun-ENG's SHPB includes sophisticated yet intuitive technology that simplifies the process for operators.

With the latest data recording devices and strain gauges, material properties can be accurately measured at various strain rates.



- Operating Fluid : Compressed Air
  - Air Pressure : 1~7[bar]
- Velocity : 1 ~ 340[m/s]
- Specimen Material : Copper alloy, aluminum, soft material, etc.
- Bar Guide : Ball Bearing / Plane Bearing
- Bar Diameter : 12, 16, 20, 25, 30 (Order specification)
- Bar Material : Order specification
- DAQ : Strain Gauge, Bridge Amplifier, Oscilloscope



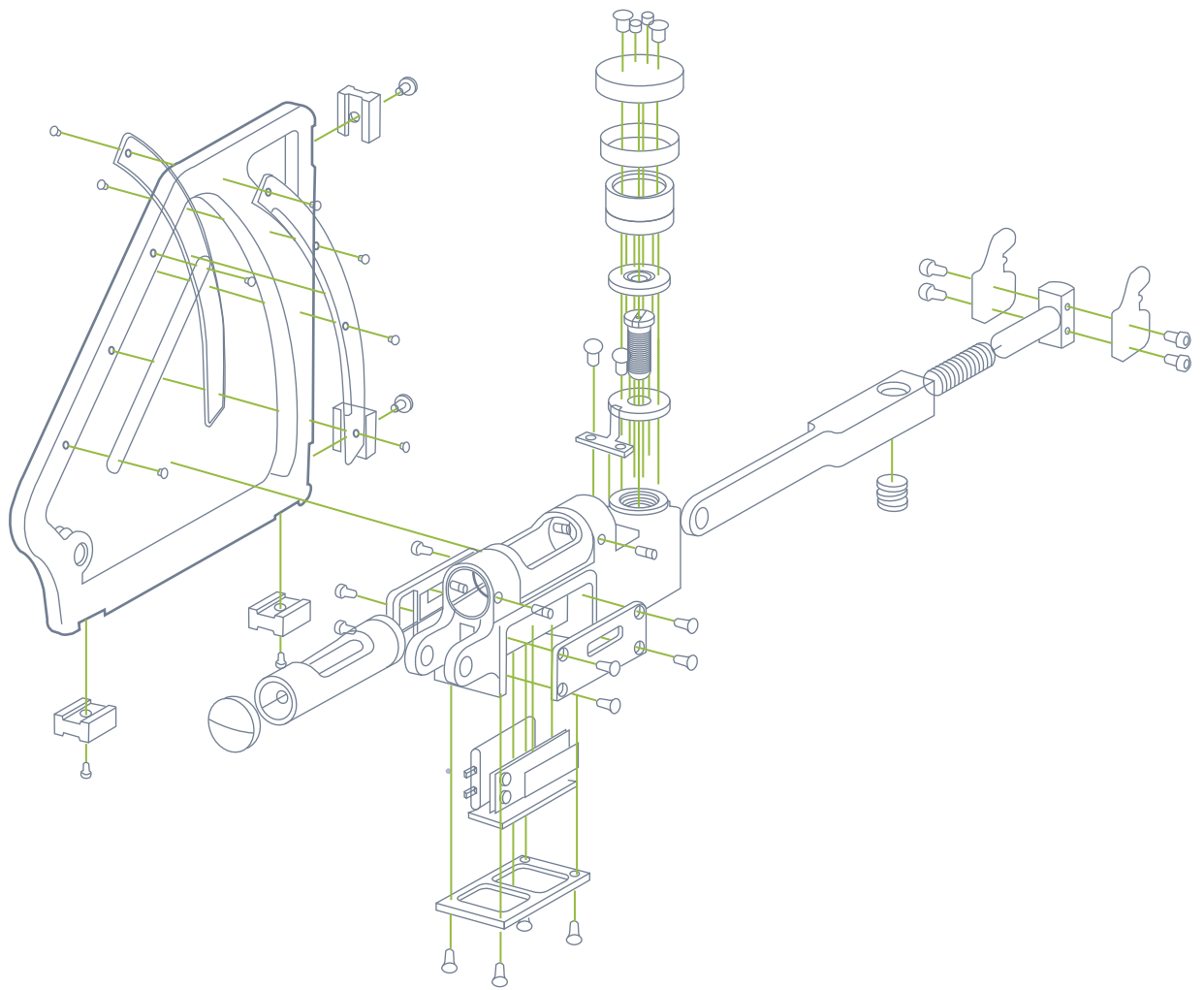
## ◦ HLRG Hybrid Light Rail Gun

Hybrid Light Rail Gun (HLRG) is a well-developed experimental facility capable of launching various types of high-speed projectiles for target ballistic tests.

It is capable of accelerating a 10g projectile over 500m/s without considerable erosion of the gun barrel, and accomplishing clean ballistic test with the aid of sabot/projectile separation technology.

- Operating Fluid : Compressed Air, Nitrogen Gas
  - Air Pressure : 1~7[barg]
- Electric Capacity : 1.5KJ More than
- Velocity : 500[m/s] More than
- Projectile Material : Aluminum, etc
- Rail Guide Block material : GFRP
- Bar Material : Order specification
- DAQ : Strain Gauge, Bridge Amplifier, Oscilloscope





Promise of Edun

# EDUN-ENG

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