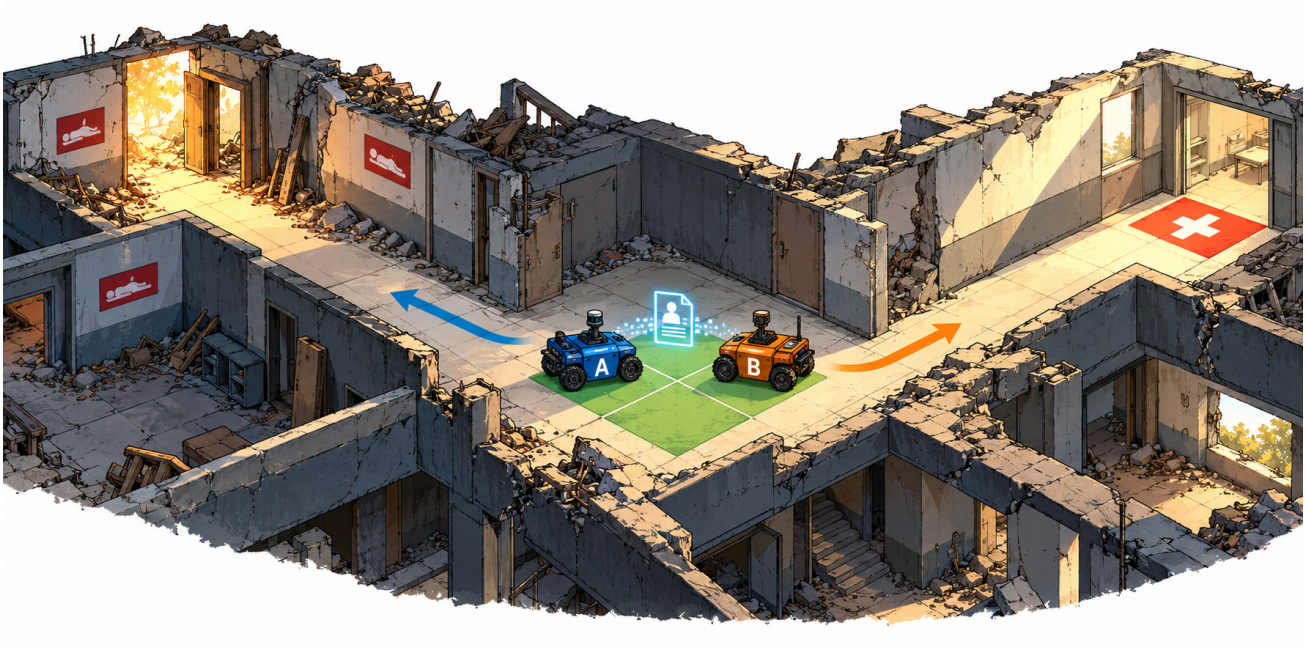
Rescue Simulation League - Super Team Event

Americas Super Regional RoboCup Competition 2026 | Student handbook edition 7 | Superteam Erebus 1.3.0

The next victim can't wait



The clock is running. Deep inside the damaged building, A spots a victim - but another unexplored corridor lies just beyond. A cannot finish this rescue alone: its job is to find victims, while B handles hospital delivery. It carries the record back to the transfer zone. B arrives from the hospital, and for one second the two robots stand still together. The record changes hands. B turns toward the hospital; A heads back into the unknown. While one robot completes a rescue, the other is already searching for the next. Every successful meeting keeps both halves of the mission moving.

Two agents. One shared goal.

This is a **multi-agent system**: independent robots share a goal and coordinate their actions. Factory and warehouse fleets use this approach to divide transport jobs and manage traffic. [1] The event provides practice in dividing responsibilities and coordinating autonomous robots around a shared task.

Story illustration, not a Webots screenshot or competition field map. The next pages explain the Superteam mission.

Industry example: OMRON Robotics - mobile fleet coordination.

Roles and scoring

A is the collector; B is the delivery robot. Their roles are fixed; both robots are autonomous and may move freely. Peer packets, shared controller files, peer networks, world manifests and supervisor-state access are prohibited.

A collects it

A reports a fresh target while stopped. If A's slot is empty, the referee stores one digital victim record in it. Pickup earns **0 points**.

A hands it to B

They meet inside transfer and stop together for one continuous simulated second. A's record moves into B's empty slot: **+50 if eligible**.

B completes the delivery

B submits a valid victim report with its centre inside hospital. Its stored record unloads: **+100 if eligible**.

One eligible complete relay earns 150 shared base points: 50 at handover + 100 at hospital.

The two meeting places

Transfer: one 2 x 2 block. A starts on one nominated tile within it.

Hospital: one red tile. B starts here; the tile stays red.

The referee tracks **one virtual record per robot**, with no queue. Genuine H/Phi, S/Psi and cognitive markers F/P/C/O can be eligible when correctly classified; the next page shows the classes.

Victim classes and eligibility

Eligibility is fixed at pickup: the marker must be genuine, correctly classified and one of H/Phi, S/Psi or F/P/C/O. U/Omega never earns points. A later report cannot repair an ineligible record.

H / Phi / Harmed: can be eligible. Artwork:

Φ

U / Omega / Unharmed: always zero. Artwork:

Ω

S / Psi / Stable: can be eligible. Artwork:

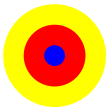
Ψ

Greek-letter markers may be genuine or fake. Genuine H/Phi and S/Psi can be eligible when correctly classified; genuine U/Omega and all fake markers earn zero.

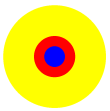
Cognitive markers: outside-to-centre order

Read the five rings from outside to centre. Y = yellow; R = red; G = green; B = blue.

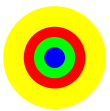
F: Y Y R R B. Can be eligible.



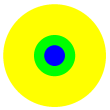
P: Y Y Y R B. Can be eligible.



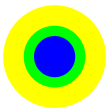
C: Y Y R G B. Can be eligible.



O: Y Y Y G B. Can be eligible.



False (not a report class): Y Y G B B. False: zero.



Wall-report acceptance

A must be physically stopped for **1 simulated second**. Both the robot and the reported position must be within **60 mm** of the marker, on the proper visible wall side. A valid associated report of a fresh marker loads A if its slot is empty.

Valid report bytes: H, U, S, F, P, C and O. X is not a valid report byte. An accepted fresh wall report permanently fades that marker, even when the result cannot score. Camera observation alone does not fade it.

Station membership and handover

The relay field is connected Area 1, with walls, obstacles and possible swamps; no black holes, checkpoints, other areas or inter-area passages. Both stations are free of walls, obstacles, swamps and victims.

Station membership uses the body centre. A wheel or floor sensor crossing the boundary is not enough.

Both centres inside: possible handover.

Centre outside: this robot has not arrived.

Handover conditions

Handover is automatic; no transfer packet is needed. The round must be active, neither robot finished, both centres inside transfer, A full and B empty. Both robots must remain **physically stopped** for one continuous simulated second. Zero motor commands do not count if a body is sliding or being pushed.

Movement, leaving, a slot change, LoP or finishing resets the wait. When the handover completes, A becomes empty and B becomes full. The referee adds 50 only if that record is eligible.

Transfer floor states

All four transfer tiles show the same colour together:

- **Yellow:** A empty, B empty. Both slots empty.

- **Blue:** A full, B empty. Not both centres inside transfer.

- **Green:** A full, B empty. Both centres inside transfer.

- **Orange:** A empty, B full. B holds a record.

- **Purple:** A full, B full. Both slots occupied.

Colours indicate slot occupancy and, for blue/green, station membership. They do not indicate record eligibility or points. All four transfer tiles change together. There are no flashing pulses. The hospital remains red.

Delivery and Lack of Progress

Inside hospital, B sends a valid victim-report packet. The referee unloads the stored record: +100 if eligible, otherwise 0. No additional hospital dwell is required.

The hospital report unloads the record already stored in B's slot. The packet's coordinates and type do not select a different record. An empty-slot hospital submission awards zero points.

Wall reports and record-loss outcomes

Situation	Referee result
A reports a new marker with a full slot	The new marker fades. A keeps its old record.
A reports U/Omega, fake or wrong class/family	A takes an ineligible record if empty. It still fills the slot.
B reports a fresh wall marker	That marker fades. B never collects from a wall; B keeps any carried record.
B sends a valid unassociated report outside hospital	B's record is discarded for zero delivery points.
Malformed/unassociated A report; associated faded-marker retry	No new marker consumption or pickup. A faded-marker retry preserves the held record.

Ineligible records remain ineligible through handover and hospital unloading; both actions award zero for that record. **Faded markers stay gone until Reset.** Losing a record does not restore its wall marker.

LoP clears the affected slot before relocation

Every LoP returns that robot to its own start and discards its record. Earned points and the other robot's record stay; there is no extra score deduction. With automatic LoP enabled, **20 continuous simulated seconds physically stopped outside stations** triggers stationary LoP. Waiting inside either station is exempt from that rule; other LoP causes still apply.

Finish conditions and final scoring

Each robot must send E with its centre inside its own designated start tile. An outside-home finish is rejected.

A: the exact nominated tile within transfer. **B:** the hospital tile. The rest of transfer is not A's home for finishing.

Finishes are independent: one robot may finish while the other continues. A finished robot cannot collect, hand over or deliver. Accepting a finish does not lock that robot's motors.

Score schedule

Event	Points
Eligible A-to-B handover	+50, once per record
Eligible hospital delivery by B	+100, once per record
Pickup; U/Omega, false or incorrectly classified record	0
Both home finishes accepted before expiry	+10% of earned base points, once

Round termination

The round ends at **8 simulated minutes**, **10 real running minutes**, referee termination, or both accepted home finishes. Pause suspends running clocks. Timeout takes priority at expiry. Held records add no final points.

Ordinary detection, map, checkpoint and area points, and ordinary fake-report score penalties, are replaced by this event's relay scoring. Robot-to-robot contact has no direct score penalty; centre-position and stationary requirements still apply during contact.