



FIRA Chovgan Simulation League Competition Rules (U14 / U19)

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Abstract

The FIRA Chovgan Simulation League is an autonomous multi-robot programming competition in which two teams, each fielding four simulated robots, compete in a physics-based Chovgan match. The league challenges teams to apply autonomous control, programming, multi-agent coordination, tactical decision-making, and communication. These skills are demonstrated through match play; they are not scored separately. The competition is divided into Under-14 (U14) and Under-19 (U19) divisions, both using the same robot model, simulation environment, game rules, and participant-facing software platform. The U14 division has access to an official Coach Board feature; this feature is not available in U19. The official match score determines the outcome of play.

Official Versions and Draft Status

The Technical Committee publishes the official competition rules and any binding technical appendices. If formally issued documents conflict, the latest applicable official version prevails. This text is a technical-review draft until approved by the organizer. Requirements marked as pending are not binding until published.

FIRA Chovgan Simulation League

The objective of this league is to encourage young participants to design and improve autonomous multi-robot strategies in a competitive simulated sport. Participants create software capable of sensing the environment, deciding on actions, coordinating with teammates, interacting with the ball, and responding to the changing game state. The simulation environment and Artificial Referee provide a consistent framework for playing and evaluating matches.

Teams are evaluated by their match results, not by separate marks for documentation, algorithmic complexity, aesthetics, or technical interviews. Technical checks may nevertheless be used to establish code authorship and compliance with the rules.

Rules of the Game

The following clauses define the participant-facing rules and the authority of the official Simulation Runtime, Software Development Kit (SDK), Technical Committee, and Artificial Referee. Only functions and information officially exposed to competitors are permitted.

Technical details referenced here must be available through the official SDK documentation or technical appendices before they are required in a match.

[CH-1] Divisions and Age Eligibility

The league has two strictly separate competition divisions: Under-14 (U14) and Under-19 (U19). U14 teams compete only against U14 teams, and U19 teams compete only against U19 teams. Cross-division matches are not permitted. Each division has its own match results and winners. A competitor must be younger than the applicable age limit on the official FIRA eligibility reference date.

For the 2026 competition year, the FIRA-wide published eligibility reference date is 30 June 2026: U14 competitors must have been born on or after 1 July 2012; U19 competitors must have been born on or after 1 July 2007.

Competitors may be asked to provide official proof of age during registration or verification. Except for the approved U14 Coach Board feature, both divisions use the same game model and technical environment under this version of the rules.

[CH-2] Team Structure and Responsibilities

Each registered team shall consist of two to four competitors and shall designate one Team Captain. The official registration procedure verifies the team roster and age eligibility.

The Team Captain serves as the team's official contact for technical issues, referee communications, and post-round appeals to the Technical Committee. Team members are responsible for the integrity and behavior of their submitted programs.

Any authorized use of the Coach Board must comply with the U14-only rule in CH-4; a coach, supervisor, or other person is not entitled to directly control robots unless an action is expressly part of that approved feature.

[CH-3] Robot Roster and Team Identity

Each team has exactly four active autonomous robots in a standard match. The Blue Team robot identities are B1, B2, B3, and B4; the Yellow Team robot identities are Y1, Y2, Y3, and Y4.

All four robots within a team have the same simulator-provided technical capabilities, constraints, and access to the permitted robot interface. No robot is assigned a mandatory permanent tactical role. Team software may allocate or change tactical responsibilities dynamically.

Teams may reuse code across robots or provide robot-specific logic, subject to the approved SDK and submission requirements. Robot identity is supplied by the official runtime.

[CH-4] U14 Coach Board and Division-Specific Access

The official Coach Board is a U14-only feature. U19 teams must not access the Coach Board or obtain match-time human tactical input through another interface. Autonomous strategy changes made entirely by permitted robot code remain allowed in both divisions.

U14 teams may use only the Coach Board functions explicitly enabled by the official U14 simulator configuration. Such authorized Coach Board activity is an exception to the general prohibition on human intervention only to the extent specified by the official Coach Board interface.

Before the Coach Board may be used in official U14 matches, the Technical Committee must publish its permitted actions, access method, available information, and any timing restrictions in an official U14 Coach Board specification. The Coach Board does not authorize alteration of referee decisions, opponent information, match physics, or other protected runtime state.

No other difference in robot capabilities, match physics, rules of play, or scoring between U14 and U19 is introduced by this document.

[CH-5] Autonomous Operation

During active match play, the four robots of each team must perform sensing, decision-making, movement, and coordination through the team's running autonomous code.

Direct human driving or manual replacement of robot decisions is prohibited, except for activities expressly permitted under the official U14 Coach Board specification. Unauthorized commands or external tactical updates may not be injected into the runtime.

Teams may inspect permitted match feedback through official interfaces; access to protected or undocumented match-state data is prohibited.

[CH-6] Robot Control and Ball Interaction

Each robot is controlled through the official Chovgan Simulation SDK and its authorized actuators and functions. This rule does not prescribe a particular mechanism for contacting or advancing the ball.

Robots may advance, redirect, push, and maintain control of the ball through valid physical interactions within the simulation. Continuous advancement or possession of the ball by the same robot is permitted and is not, by itself, a foul.

Participant code must not directly alter the ball's coordinates, velocity, ownership state, collision state, or any other protected physical property through unauthorized programmatic access.

Robot actions are subject to the decisions of the official referee. Continuous legal ball control is permitted; any interruption of play is administered by the referee in accordance with the competition rules.

[CH-7] Match Objective and Outcome

The objective of each team is to score more valid goals than its opponent during the official match.

Under normal play, the team with more goals at the end of the official match is the winner. If the teams have equal scores, the match is recorded as a draw unless a separately authorized match-resolution instruction applies.

No separate score is awarded for style, possession time, passes, code complexity, technical interviews, or any other non-goal achievement. A documented disciplinary ruling may affect the official result under CH-27.

[CH-8] Official Simulation Runtime and SDK

All official matches shall use the organizer-approved Chovgan Simulation Runtime and version of the SDK identified for the event. Both teams in the same match shall be evaluated under the same physics configuration, referee logic, and applicable participant interfaces.

The SDK shall define the supported language/runtime environments, controller lifecycle, robot identity access, device and action interfaces, and submission package requirements. Teams must use these published participant-facing interfaces rather than relying on private simulator implementation details.

The internal simulation engine is a technical implementation choice and does not change the participant obligations specified in the official rules.

[CH-9] Robot Sensors and Participant Interfaces

The official SDK shall provide the sensor data and actuation interfaces authorized for robot control. The authoritative API reference shall identify available devices or functions, data formats, coordinate conventions, measurement units, update frequency, and any applicable range or precision limits.

All four robots on either team shall receive equivalent access to the permitted interfaces, subject only to explicitly documented robot identity and team side differences.

Teams shall not assume that undocumented devices, internal supervisor controls, or protected state are part of the public API.

[CH-10] Optional World State Interface

If released by the Technical Committee, an official World State interface may provide published state fields intended to support strategy and coordination. The published SDK shall specify exactly which fields are available, their update behavior, and whether any restrictions apply.

An available World State interface must not directly provide recommended tactical actions, optimal shots, best formations, or other strategy answers. Team software remains responsible for strategy and action selection.

Any World State functionality available to robot controllers shall be governed by the same published access rules in both divisions; the U14 Coach Board is a distinct, division-specific feature.

[CH-11] Team Communication

Robots on the same team may exchange information through the officially authorized in-simulation Team Communication interface.

Messages may include team-generated estimates, state information, role assignments, or tactical data. The exact delivery behavior, permitted message size, and message-rate restrictions shall follow the published SDK.

Interception of opponent messages, direct communications with the opposing team, and unauthorized network, file, shared-memory, or inter-process communication channels are prohibited.

[CH-12] Arena and Coordinate System

Official matches take place in the Chovgan arena provided by the Simulation Runtime. The arena includes the playable area, boundaries, two goals, robot starting positions, and locations used by the Artificial Referee.



Figure 1 — Arena view from a development build of the Chovgan simulator. This image is illustrative; it does not define official field dimensions, starting positions, or match timing.

The official technical documentation shall identify the participant-facing arena dimensions, goal areas, and coordinate conventions needed to program a robot correctly. Referee-only restart locations and internal decision thresholds are controlled by the match system and need not be disclosed.

The same arena and physics rules apply to both teams. No team may modify field objects, scoring geometry, runtime coordinates, or other environment properties outside the authorized SDK.

[CH-13] Ball and Physical Interaction

The match ball is a physics-controlled object managed by the official Simulation Runtime. Robots may interact with it only through permitted robot behavior and physical simulation.

The simulator applies the same ball physics and collision model to both teams. Participant documentation shall describe the approved interaction interface and any information needed to use it correctly; private referee calculations and internal thresholds are not part of the public rules.

Ball possession and continued advancement are allowed as described in CH-6. Such possession does not exempt a team from decisions made by the official referee.

[CH-14] Match Preparation and Start

The Artificial Referee controls the official match state and places the ball and robots in their designated initial positions before active play.

Robots must not execute active field movement before the official start state. When the simulator signals the start of play, autonomous controllers may act under the official match clock.

The official simulator and referee determine initial positions and team sides. Any repositioning or change of sides is controlled by the official match system; participants may not reposition their own robots.

[CH-15] Match Duration and Official Clock

An official match consists of two halves, each lasting two minutes on the official match clock. The referee and simulator control the start and end of each half and any transition between them.

The official match clock is controlled by the Simulation Runtime and the referee. Decisions about interruptions, continuation, or resumption of play belong to the official match system; participants cannot alter the clock.

Both teams in a match operate under the same official timekeeping rules. Participants may not directly modify or override the match timer.

[CH-16] Goals and Own Goals

A goal is valid only when the official simulator and its Artificial Referee register it as a legal goal. The referee's official scoring record is authoritative; no separate goal-detection mechanism or threshold is defined by these competition rules.

Every valid goal adds one to the scoring team's match score. A valid own goal adds one to the opposing team's match score. There are no separate performance points for ball possession, passing, or programming complexity; disciplinary rulings may affect the recorded result as provided in CH-27.

The Artificial Referee records the scoring team and the official score. Participants may not claim or award goals independently or alter the simulator's scoring decisions.

[CH-17] Fouls and Aerial Ball Restarts

Not every collision, contact, or tactical block is a foul. A foul occurs when the official referee determines that a prohibited action has taken place under the competition's match-control system.

When a foul is awarded, play may be stopped and resumed through an Aerial Ball Restart administered by the official referee. The referee determines the restart, and teams must follow the resulting official match state.

Competitors, coaches, and team code may not declare or cancel official fouls, force a restart, or override referee decisions.

The internal criteria and detailed mechanics used to identify fouls and carry out restarts are administered by the official match system. These operational details are not part of the participant-facing competition rules.

[CH-18] Stoppages, Repositioning, and Respawn

The official referee may stop play or reposition the ball or robots when necessary to continue the match, including after a goal or during a technical interruption. The simulator carries out any authorized changes.

Participant programs are not permitted to teleport, respawn, or reposition physical objects through unapproved interfaces.

The referee determines whether and how play is resumed or objects are repositioned. The same authority and general principles of fair play apply to both teams; detailed internal restart conditions are not disclosed in these rules.

[CH-19] Lack of Progress

The official referee may determine that play has stalled or is no longer progressing (Lack of Progress). This determination is part of match control and is not, by itself, a separate foul or disciplinary offense.

When Lack of Progress is declared, the referee may stop and restart play as needed. Continued legal ball possession or advancement does not automatically require a stoppage.

The decision and restart procedure are administered by the official referee and simulator. No participant is entitled to demand a particular threshold, restart location, or sequence.

[CH-20] Artificial Referee and Match Authority

The Artificial Referee is the primary authority for automated match events, including goals, fouls, restarts, official timekeeping, and the recorded score. The Head Referee and authorized

officials oversee the competition and have authority over exceptional operational and technical decisions.

Authorized officials may review technical incidents, integrity concerns, and appeals. They should not replace routine automated decisions with tactical preferences. Any exceptional intervention must be applied impartially and recorded by the organizers.

When a technical problem disrupts a match, the Head Referee determines the appropriate response, including whether to resume, replay, or uphold the recorded result. This decision is subject to an appeal to the Technical Committee under CH-28.

[CH-21] Code Submission and Validation

Each team must submit its robot code in accordance with the official competition instructions and submission deadline. The proposed format is one ZIP archive containing the controllers for all four team robots. The Technical Committee shall publish the approved file structure, controller entry point, accepted dependencies, upload procedure, and verification requirements before the competition.

The organizer may validate required files, launch behavior, supported dependencies, permitted interfaces, resource usage, and security restrictions before admitting an entry to an official match.

Teams must not replace or modify their submitted competition code after the announced deadline without authorization through the official technical procedure.

[CH-22] Runtime Performance and Resource Limits

Submitted code must not deliberately impair the simulator, create uncontrolled processes, exhaust shared resources, flood output or messages, or interfere with the opponent's program.

CPU, memory, execution-time, process, logging, and communication limits shall be defined in the official runtime specification and enforced equally for both teams.

A violation of a published technical limit may result in validation failure or a sanction under CH-27, with the cause and action recorded by the judging system.

[CH-23] Internet, External Services, and AI

During an official match, robot code must not use the public Internet, remote application programming interfaces, cloud services, remote AI inference endpoints, external control servers, or unauthorized file and network channels.

Offline libraries, dependencies, or models may be used only when supported by the approved submission environment and applicable resource limitations.

The use of development tools, including AI-assisted programming tools, does not remove the requirement for competitors to understand and explain their own submitted code.

[CH-24] Technical Failure and Controller Crash

A technical problem that materially affects a match must be reported to the Head Referee through the official event contact channel. This does not authorize competitors to pause, stop, or modify the match themselves.

When a simulator, organizer-side system, or team controller fails, the Head Referee assesses the incident and determines whether the match continues, resumes, is replayed, or is otherwise resolved. A failure caused by a team's own code does not automatically entitle the team to a replay.

Detailed incident thresholds and recovery procedures are managed by authorized officials. Teams must comply with the announced decision. Any action affecting the official result must be recorded and handled consistently for both teams.

[CH-25] Technical Interview and Code Authorship

The Technical Committee may verify that registered competitors understand their submitted program, its control behavior, and its autonomous strategy.

Interviews or code-understanding checks are compliance and authorship procedures and do not contribute separate performance points to the match result.

A confirmed integrity violation discovered during such a check may be addressed under the disciplinary provisions of these rules.

[CH-26] Fair Play and Competition Integrity

Participants must not modify or bypass the official runtime, Artificial Referee, validator, timer, or scoring system; gain unauthorized access to opponent code or protected information; or exploit private interfaces or communication paths.

Participants must not deliberately crash the simulator, interfere with the opponent's execution, misrepresent team identity, or conceal an identified unauthorized access.

Potential security or integrity incidents must be reported promptly. The Technical Committee may inspect available evidence to determine whether behavior was accidental, negligent, or deliberate.

[CH-27] Penalties and Disqualification

A verified rules violation may result in a warning, rejected code submission, corrective action, match forfeiture, or disqualification, depending on its seriousness. Sanctions are decided by authorized competition officials and must be applied consistently.

Deliberate compromise of match integrity, unauthorized access to opponent or referee-protected data, or intentional interference with another team's running program may result in immediate disqualification after verification.

Any action changing an official score or result must be documented with the relevant rule, evidence, and decision authority. Routine physical fouls are handled automatically through the game mechanics in CH-17 unless a separate integrity violation exists.

[CH-28] Appeals

After their round has ended, the registered Team Captain may submit an appeal to the Technical Committee concerning a recorded result, technical incident, or alleged violation of these rules. Appeals may not be used to interrupt active play.

The appeal must identify the round or match, explain the disputed issue, and provide any available evidence. These rules impose no fixed numerical appeal deadline; teams should raise concerns directly with the Technical Committee following their round through the official event contact channel.

The Technical Committee reviews the appeal and may consult the Head Referee, the official score, and relevant match logs. The recorded result remains in force unless the Committee issues an authorized correction or decision.

[CH-29] Demo and Practice Environment

The Technical Committee may publish an official training environment and SDK to enable teams to test code, control behavior, and strategy before official matches.

The training environment should implement the same published participant-facing interfaces and essential game behaviors as the official runtime, with any approved differences disclosed in the technical materials.

Teams may not assume that privately modified training environments, undocumented runtime features, or unofficial simulator builds are valid in an official match.

[CH-30] Rule Updates and Referee Authority

The Technical Committee may issue official corrections, clarifications, and technical appendices. Changes affecting age eligibility, permitted interfaces, Coach Board access, match scoring, physical interactions, or other material obligations must be published consistently to affected participants.

When the rules do not address an operational situation, the Head Referee may make a fair and consistent decision within the competition's authority. Internal foul-detection and restart algorithms need not be disclosed to participants; the Technical Committee may review exceptional incidents and appeals under CH-28.

Participants are responsible for complying with the latest officially issued version and its binding annexes.

Technical Matters for Organizer Confirmation

The following administrative and participant-interface details remain to be approved or published. They do not change the confirmed rules on team size, four robots per team, match duration, scoring, or referee authority. Internal referee algorithms and tactical thresholds are not disclosed in this document.

- official participant-facing arena geometry and coordinate conventions, where needed for programming;
- published robot device names, supported actuators, and permitted SDK operations;
- SDK/runtime versions, sensor fields, controller lifecycle, and any approved optional World State features;
- U14 Coach Board functions and access restrictions;
- official code submission ZIP structure, loader behavior, and upload channel;
- supported Python environment, dependencies, and execution resource limits;
- any public technical information required for teams to run programs fairly and safely;
- operational contact channels for technical incidents and post-round appeals;
- final organizer approval of this rules version.

Organizer-managed operational procedures, including internal foul detection, Lack of Progress decisions, and restarts, need not be published as exploitable numeric thresholds. Any participant-facing requirements must nevertheless be applied consistently and communicated before they are enforced.

End of Rules