Coordination

- General
- TWR/GND
- APP/ACC
- Handover-Takeover

General

The Role of Coordination

Coordination helps controllers stay aware of aircraft that are about to enter their jurisdiction and ensure they will operate in a predictable manner, which allows for easier planning of sequencing and separation. Controllers must engage in constant communication to resolve potential conflicts, hand off aircraft, and maintain the integrity of established traffic flows. In high-density airspace with multiple sectors, controllers must often rely on coordination with adjacent units to address traffic complexities that cannot be resolved within a single sector.

When receiving a coordination call, respond by stating your position. If you are busy, ask the other controller to standby. If the delay will be significant, inform them that you will call back. Each instruction, clearance, or change must be verbalized once by each controller to confirm understanding. If multiple changes are discussed and not yet verbalized by both parties, a readback is required.

Standardised **operating procedures** and **letters of agreement (LoA)** define many of these handover conditions, detailing the required flight levels, routing, and speed constraints for transferring aircraft. However, real-time adjustments are often necessary due to weather changes, unexpected congestion, or airspace limitations. Effective coordination ensures that all necessary deviations are communicated and agreed upon between controllers.

Principle of Receiving Unit Control

A core concept in air traffic management is that **"the receiving unit sets the entry conditions."** This means the sector accepting an aircraft determines the required altitude, speed, and routing.

For instance, if Sector 1 hands off to Sector 2, and Sector 2 mandates aircraft to enter at **FL290, speed 280 knots, and a direct route to a designated waypoint**, then Sector X is responsible for ensuring compliance before the transfer. While adjustments and negotiations are always possible, this principle ensures clarity and consistency in traffic handling.

Point-to-Point Coordination

Coordination must follow a **point-to-point** structure, meaning you can only coordinate with the sector the aircraft is arriving from or going to—**no skipping sectors**.

Example:
If an **ACC controller** needs to pass an amended route to an aircraft on the ground, they cannot coordinate directly with **GND or TWR** if the aircraft is currently under **APP's** control. Instead, ACC

must coordinate with APP, and it is then **APP's responsibility** to pass the coordination down the line as needed.

Best Practices for Effective Coordination

All coordination must be **clear and unambiguous**. Not all controllers will strictly follow phraseology rules, so when using plain language, ensure both parties fully understand the message.

To ensure smooth coordination, controllers should:

- Communicate early when standard handoff conditions cannot be met.
- Negotiate changes proactively to prevent last-minute conflicts.
- Consider weather impacts, airspace restrictions, and real-time traffic adjustments.
- Ensure that deviations from agreements are confirmed by both sending and receiving sectors.

Early notification and strategic communication facilitate a smoother workflow and prevent operational disruptions.

Key Considerations

- **Coordination is essential** for maintaining a safe and efficient air traffic control system.
- **LoAs provide a structured handover process**, but flexibility is needed in dynamic conditions.
- **The receiving sector defines entry conditions**, but collaboration ensures adaptability.
- **Timely communication prevents operational bottlenecks** and enhances overall traffic management.
- **Controllers should anticipate potential conflicts** and adjust accordingly with preemptive coordination.

TWR/GND

Effective coordination between ATC units is essential for safe and efficient air traffic management. While many procedures are defined in **SOPs**, some situations require direct **controller-to-controller coordination** to handle **non-standard operations** effectively.

Coordination Between TWR) and APP

Tower and Approach controllers must coordinate in various scenarios, including:

- **Vectored Departures** → When a pilot cannot or does not want to fly a **SID**.
- **Visual Departures** → If permitted under **SOPs**.
- **Departure Releases** → When required for **IFR departures**.
- **Non-Standard Approach Procedures** → e.g., **visual approaches** when a pilot cannot fly a standard approach.
- **Emergencies** → Including all **relevant details**.
- **Missed Approaches** → Coordination on reasons & further instructions (**usually the standard missed approach**).
- **SVFR Operations** → Allowing APP to **increase arrival spacing** if necessary.
- **Low Visibility Operations** → Adjusting procedures to ensure safe traffic flow.
- **Runway Closures/Reopenings** → Ensuring both controllers manage traffic accordingly.
- **Runway Direction Changes** → Synchronizing arrivals and departures to the new configuration.
- **Departures from Non-Standard Runways** → If a pilot requests a **different departure runway** than the one in use.

Coordination Between Tower (TWR) and Ground (GND)

Efficient communication between **TWR and GND** is necessary in situations such as:

- **Incorrect Taxiing** → When an aircraft mis-taxis and needs **rerouting**.
- **Technical Issues at the Holding Point** → If an aircraft has a technical problem, requiring **subsequent departures to be rerouted**.
- **Pilot Requests Specific Intersection** → When a pilot requests a **specific taxiway intersection** for departure.
- **Missing Aircraft on Frequency** → If an aircraft **has not switched frequencies as expected**, coordination is needed to locate them.

Coordination Guidelines

Unlike some Approach and Center coordination, **Tower and Ground coordination does not follow strict phraseology**. Instead, controllers should use **clear and concise plain language** to keep communication **brief and efficient**—especially when the receiving controller is busy with

pilot interactions.

Example Coordination Exchanges

Tower and Approach Coordination

TWR → APP:

> "Approach, Tower."

APP → TWR:

> "Go ahead."

TWR → APP:

> "TUN988 cannot fly SIDs and needs direct MEDIL. What vectored departure should I issue?"

APP → TWR:

> "Climb runway track to 4000 feet, expect radar vectors."

TWR → APP:

> "Copied."

Tower and Ground Coordination

TWR → GND:

> "Ground, Tower."

GND → TWR:

> "Go ahead."

TWR → GND:

> 🢐 "KMR112 mis-taxied, now coming via J5 instead of J2."

GND → TWR:

> 🢐 "Roger."

Class D Airspace Coordination

ACC/APP ? Class D Tower (Heads-Up Coordination)

For arrivals or overflights, coordination should be completed **at least 5 minutes before the boundary**.

Format for Verbal Coordination

> 🢐 "Via (Route/Procedure), (Callsign), (Level - if different from standard), (Runway - if not duty runway)"

Class D Tower ? Enroute/Approach (Next Call Coordination)

For all **CTA/TMA departures**, the **next call must be made within 2 minutes of takeoff**.

Radar Tower Coordination

Radar Tower ? Approach (APP) Coordination

- The **Radar Tower must coordinate all departures** with APP unless local **Auto Release** rules apply.
- If **Auto Release is overridden or suspended**, the TWR must **advise APP of any aircraft with a takeoff clearance**.

Timing Requirement

- **Next call must be made within 2 minutes of takeoff** unless Auto Release applies.

Phraseology Example: Cancelling Auto Release

APP → TWR:

> ❝ "Cancel Auto Release."

TWR → APP:

> ❝ "Cancel Auto Release, MAC477T released."

APP → TWR:

> ❝ "MAC477T."

Approach (APP) ? Radar Tower Coordination

- **Radar Towers must Next-coordinate all departures**, unless Auto Release is active.
- APP responds with **any required lateral departure instructions** (if needed for SID or departure procedures).
- APP may also apply **additional vertical restrictions** or state **"unrestricted."**

Auto Release Suspension

If Auto Release **must be cancelled** due to **weather, overflying aircraft, or runway configuration changes**, APP **must notify the ADC controller**.

- **ADC will then respond** with any aircraft that **already have takeoff clearance**.

APP/ACC

Upstream and Downstream Sectors

- **Upstream Sector**: The sector an aircraft is coming **from** before entering the current sector.
- **Downstream Sector**: The sector an aircraft is heading **to** after leaving the current sector.

Example
If an aircraft transitions through **Sector A → B → C**:

- From **Sector B's perspective**:
  - **Sector A is the upstream sector** (where the aircraft is coming from).
  - **Sector C is the downstream sector** (where the aircraft is going).

Coordination Point (COP)

A **Coordination Point (COP)** is a designated waypoint near a sector boundary where aircraft are handed off between controllers.

Common COP types:

- **COPN (Entry COP)** – The point where an aircraft enters the sector.
- **COPX (Exit COP)** – The point where an aircraft leaves the sector.

Controllers should use **well-known waypoints, VORs, or major aerodromes** when coordinating handoffs. In VATSIM, specifying the **exact location** of an aircraft is useful since pre-planned coordination is less structured than in real-world operations.

Transfer of Control

The **transfer of control** occurs when responsibility for issuing flight instructions (altitude, heading, speed) moves from one controller to another.

Unless otherwise specified in a **Letter of Agreement (LoA)** or verbal coordination, control is transferred **when the aircraft enters the new sector** and has reached **half of the required minimum separation distance** from the boundary.

Example

- If the required separation is **3 NM**, control is considered transferred once the aircraft is **1.5 NM into the receiving sector.**

This ensures that both sectors **maintain full separation** without additional coordination.

Silent Transfer of Control

In some cases, an **LoA allows for silent transfer of control**, meaning an aircraft can be handed off without requiring additional verbal coordination.

This applies when:

- The aircraft meets pre-agreed conditions.
- The receiving controller is **already aware of the aircraft**.
- The route, level, and conditions do not require coordination.

Certain **routes, levels, and airspace** have predefined silent coordination agreements, eliminating the need for verbal coordination. However, restrictions may still apply, preventing changes close to sector boundaries.

Handoffs

A **handoff** occurs when control of an aircraft is transferred between controllers.

Once a receiving controller accepts a handoff, they can:

- **Turn the aircraft up to 45 degrees left or right** without further coordination.
- **Climb or descend the aircraft** to any level without additional coordination.

Handoff Restrictions

- **Do not hand off an aircraft** if a **turn of more than 45 degrees or a level change** will cause a conflict.
- If needed, apply **restrictions before the handoff** to ensure separation.

Full Control After Handoff

- Once the aircraft is **within half the applicable lateral standard** (**2.5 NM for ENR, 1.5 NM for TWR/APP**), the receiving controller **can issue unrestricted turns and level changes**.
- If a **turn greater than 45 degrees** is needed earlier, **coordination is required**.

Transfer of Communication

A **transfer of communication** happens when an aircraft is instructed to switch to a new ATC frequency.

- **This does not always mean control has been transferred.**

- Communication and control transfers can **happen separately** based on operational needs.

For example, a controller may hand off communication early while still **retaining control** of the aircraft for sequencing or separation purposes.

Controller Initials in Coordination

In real-world ATC, controllers are identified by **unique initials** (formed from their first and last names).

During **verbal coordination**, initials are exchanged as a **confirmation that both controllers agree on the handover**.

- The conversation is **not complete** until both controllers **state their initials**.

Approval Request

When a controller needs approval from another sector for a specific action, an **Approval Request** is used.

This is common for:

1. **Direct Routing Requests**
2. **Climbing or Descending Across a Sector Boundary**
3. **Deviations from Agreed Flight Levels**

Each type of request follows a **standard format** to ensure clarity and efficiency in coordination.

Direct Routing Request (Downstream Coordination)

Granting a **direct-to waypoint** clearance can improve efficiency, accommodate pilot requests, or resolve conflicts. Within a controller's **own sector**, this can be done without coordination. However, if the waypoint is in an **adjacent sector**, approval from the downstream controller is required.

This request can be made using **Euroscope coordination functions** or **verbally**.

Format for Verbal Coordination

> **APPROVAL REQUEST <COP/position> <call sign>**
> **DCT <waypoint>**

Procedure

1. Contact the receiving sector and wait for their **"Go ahead"** response.
2. This allows the receiving controller to check the aircraft's position and potential conflicts.
3. Once permission is granted, the request is either **approved or denied**.

Climbing/Descending at Sector Boundaries

By default, aircraft should be **level** when crossing a sector boundary unless an **LoA (Letter of Agreement)** states otherwise.

- **Any climb or descent at or near a boundary must be coordinated.**
- Coordination is required **if vertical movement occurs within half of the minimum separation distance** before the aircraft enters the next sector.
- This type of coordination must be done **verbally**, as Euroscope does not handle altitude change requests automatically.

Format for Verbal Coordination

> **APPROVAL REQUEST <COP/position> <call sign>**
> **CLIMBING <level> / DESCENDING <level>**

Deviation from Agreed Flight Level

If an aircraft must cross a sector boundary at a **different level than agreed** in the LoA, coordination is required. This can be done using:

- **Euroscope functions**
- **Verbal coordination**

Clearing Through a Third-Party Sector

If an aircraft requires clearance through a sector that is **not normally involved**, additional coordination is needed.

- Standard **Coordination Points (COPs) do not apply**, as the aircraft is not expected to enter the third-party sector.
- The **affected sector does not have flight details** in Euroscope and does not consider the aircraft as relevant traffic.

Format for Verbal Coordination

> **APPROVAL REQUEST FOR AIRSPACE CROSSING <call sign> <position>**
> **CLIMB UP TO FLxxx (routing) / DESCEND DOWN TO FLxxx (routing)**

This is often **mistaken for a release**, but it is strictly an approval request. Releases are discussed in a separate section.

If the previously uninvolved sector **assumes full control** of the aircraft or **takes over** from the originally planned downstream sector, an additional request format is used:

> **APPROVAL REQUEST FOR ADDITIONAL TRAFFIC AIRBORNE MARRAKECH**
> **<call sign>**
> **DCT SLK FL300**

This shifts the responsibility of further downstream coordination to the accepting sector.

Boundary Coordination

Boundary coordination is required when an aircraft is expected to **deviate within half of the required separation** for another sector's airspace.

This applies if an aircraft is within:

- **500 ft vertically**
- **2.5 NM laterally (enroute sectors)**
- **1.5 NM laterally (approach/tower sectors)**

Boundary coordination informs the adjacent sector about the aircraft and allows them to impose restrictions if necessary.

Format for Verbal Coordination

- **Controlling Sector → Boundary Sector:**

  > For Ident, (Position), (Callsign), (Details as required)

- **Boundary Sector → Controlling Sector:**

  > (Callsign), (Restriction)

Example Phraseology

SOU → NOR: "For Ident, overhead SAK, RAM12, do you have any restrictions on descent?"
NOR → SOU: "RAM12, No restrictions on descent."

If the boundary sector has **no restrictions**, they may **omit the restriction** and simply read back the callsign. This confirms that no vertical or lateral restrictions apply.

Example Phraseology with Omission

WES → EAS: "For Ident, west of RAVMA, AB123"
EAS → WES: "AB123"

Spacing Below Standard Separation

Silent transfers of control typically requires **10 NM separation** at the **same speed**. The following rules apply when transferring aircraft at the **same flight level**:

Condition	Required Separation
Leading aircraft is at the **same speed or faster**	10 NM
Trailing aircraft is **up to 20 knots / M0.05 faster**	20 NM
Trailing aircraft is **up to 40 knots / M0.10 faster**	30 NM

Example Scenario

Two aircraft are transferred with **15 NM separation**, but the trailing aircraft is **30 knots faster**.

- Since **none of the above conditions are met**, either:
  - **Speed control must be applied** to match speeds, or
  - **Coordination is required** before transfer.

Format for Coordination

> **APPROVAL REQUEST <COP/position> <call sign>**
> **<distance> <speed difference>**

Release Coordination

A **release** allows the receiving sector to issue instructions **before** an aircraft **crosses the sector boundary and control is officially transferred**.

- If the receiving controller wants to issue a **turn, climb, or descent before transfer**, they must **request a release**.
- Without a release, the aircraft **must continue as planned until control is formally transferred**.

Types of Releases

Type of Release	Purpose
Turn Release	Allows a turn up to **45 degrees left or right** before control transfer.
Climb Release	Allows the receiving sector to **issue a climb** before control transfer.
Descent Release	Allows the receiving sector to **issue a descent** before control transfer.
Full Release	Grants **full control** (turns, climbs, and descents) before transfer.

Requesting a Release

A release can be **sent with the handoff via Euroscope** (TopSky plug-in), but if this is **not done**, the receiving sector must request the release **verbally**.

Format for Verbal Request

> **REQUEST RELEASE <callsign>**

Example Phraseology

NOR → SOU:

> "REQUEST RELEASE (FOR (RIGHT/LEFT) TURNS / FOR CLIMB / FOR DESCENT) RAM123"

SOU → NOR:

> "RAM123 RELEASED (FOR (RIGHT/LEFT) TURNS / FOR CLIMB / FOR DESCENT) <initials>"

NOR → SOU:

> "<initials>"

A **Coordination Point (COP) is not required** in this communication.

Release Subject to Discretion (SYD)

A **Release Subject Your Discretion (SYD)** is used when the releasing sector has other aircraft that may impact the release.

- The **aircraft is released**, but the **receiving sector is responsible** for ensuring separation from specified traffic.
- The releasing sector provides **traffic details**, and the receiving controller must **maintain separation** accordingly.

Example of SYD Release

NOR → SOU:

> "REQUEST RELEASE RAM123"

SOU → NOR:

> "RAM123 RELEASED SYD RYR123 overhead FOBAC on R722, FL290 <initials>"

NOR → SOU:

> "<initials>"

Explanation

- NOR wants to **climb RAM123**, but SOU has **RYR123 crossing at FL290** on **R722**.
- With this **SYD release**, NOR can **initially climb RAM123 to FL280**.
- Once lateral separation is ensured, NOR can allow further climb.

The key to **SYD releases** is ensuring both controllers **clearly understand who is responsible for separation**.

Heads-Up Coordination

Heads-up coordination is used to **notify the next sector** about an incoming aircraft.

Format for Verbal Coordination

- **Controlling Sector → Receiving Sector:**

> **(Position), (Callsign)**

- **Receiving Sector → Controlling Sector:**

> " **(Callsign), (Level)**

Example Phraseology

NOR → SOU:

> " "Via SLK, RAM1234"

SOU → NOR:

> " "RAM1234, F350"

If the assigned level **at transfer of jurisdiction** is different from the **current CFL**, the controlling sector must specify:

> " "Will be assigned (level)."

If the receiving sector needs a different level, they will **respond with the amendment**.

Example Phraseology with Level Change

NOR → SOU:

> " "Via SLK, RAM1234"

SOU → NOR:

> " "RAM1234, F300 due traffic"

NOR → SOU:

> " "F300, RAM1234"

Once coordination is completed, the aircraft's **level and route are locked in**.
Any further changes **must be re-coordinated**.

Best Practice

- The best time to conduct **Heads-Up Coordination** is when the aircraft **first checks in**.
- **Do not delay coordination** until just before the transfer.

Reference Calls

When an action **does not fit an Approval Request or Release**, a **Reference Call** is used.

Primary Use Case

- A **request to the upstream sector** when an aircraft needs to **enter a sector in a non-standard manner**.

Example Reference Call

SOU → NOR:

> " "REFERENCE SLK RAM123"
> "REFERENCE 20 MILES WEST OF SLK RAM123"

NOR → SOU:

> " "Go ahead"

SOU → NOR:

> " "REQUEST HIM DIRECT MABAP"
> "REQUEST HIM DCT MAK, DESCENDING FL90"
> "REQUEST HIM AT FL200"
> "REQUEST HIM AT SPEED 250 KNOTS"

NOR → SOU:

> "CONSIDER <initials>"
> "WILCO <initials>"
> "UNABLE <initials>"

SOU → NOR:

> "<initials>"

Reference Call Responses

- **WILCO** = Request **accepted**.
- **UNABLE** = Request **denied** or **renegotiation needed**.

Using Reference Calls for Requests

A **Reference Call** can also be used instead of an **Approval Request** for **open-ended** coordination.

Format for Verbal Coordination

> **REFERENCE <COP/position> <callsign>**
> **REQUEST HIGHER/LOWER LEVEL**

Common Uses

- **Transitioning between Approach (APP) and Center (CTR)**
- **Moving between Lower Center and Upper Center (or vice versa)**
- **Ensuring climb/descent clearance before handoff**

If an aircraft has not yet **completed a crossing**, a **Reference Call** allows controllers to **coordinate a higher/lower level** for smoother sequencing.

Departure Release Requirements

At certain airports, a **Departure Release** must be obtained from the radar sector before each IFR departure.

- The **radar sector (APP/ACC)** ensures **separation between IFR arrivals and departures**.
- Whether a departure **requires a release** is determined by the **airport's Tower SOP**.

Departure Release Coordination

If a release is required, coordination follows this structure:

Format for Verbal Coordination

TWR → Radar (APP/ACC):

> " "REQUEST RELEASE RAM123"

Radar (APP/ACC) → TWR:

> " "RAM123 RELEASED <initials>"
> "RAM123 RELEASED AFTER LANDING RYR123 <initials>"
> "RAM123 RELEASED, CLEARANCE EXPIRES AT 1530 <initials>"
> "RAM123 RELEASED AT 1520 <initials>"
> "UNABLE, CALL YOU BACK <initials>"

TWR → Radar (APP/ACC):

> " "<initials>"

If a **release is denied**, the radar controller will call back when the departure is **approved**.

Next Coordination

Departure release coordination is conducted between **TWR and APP/ACC** controllers to determine the **next aircraft to depart**.

- **All IFR departures require Next Coordination** unless the airport has **Auto Release** in place.
- **Auto Release** can be **canceled** at any time by mutual agreement between TWR and APP controllers.

Format for Verbal Coordination

TWR → APP:

> " "Next, (Callsign), (Runway)"

APP → TWR:

> ❝ "(Callsign), (Runway), (Lateral and/or Vertical Instructions)"

Departure Instructions

Instruction	Meaning
Left/Right Turn	Make a visual left/right turn to establish on the planned outbound track.
Left 180	At the SID turn height (or safe altitude for visual departures), fly heading 180.
Left 180 Visual	Same as above, but the pilot must maintain visual separation from terrain.
Extended Runway Centerline	Track the extended runway centerline (accounting for drift).

- An **amended level** may be assigned.
- The term **"unrestricted"** may be used to indicate **no vertical restrictions** apply.

> ❝ **Note:** "Unrestricted" is **not a readback item**.

Example Phraseology

Visual Departure Example (LAM departing from GMAD)

TWR → APP:

> ❝ "Next, LAM, runway 27"

APP → TWR:

> ❝ "LAM, runway 27, left turn, unrestricted"

TWR → APP:

>

> "Left turn, LAM"

Procedural SID Example (EZY342 from GMAD, Auto Release cancelled)

TWR → APP:

> ❝ "Next, EZY342, runway 27"

APP → TWR:

> ❝ "EZY342, unrestricted"

Airways Clearance Coordination

At some aerodromes, **TWR must coordinate with APP/ACC before issuing an airways clearance** for certain aircraft.

- This allows the **APP/ACC controller** to evaluate **current and projected traffic levels**, position staffing, and overall airspace workload before approving clearance.
- Coordination ensures **seamless integration** of departing aircraft into enroute traffic.

Format for Verbal Coordination

TWR → ACC:

> ❝ "(Callsign) requests clearance to (Destination), (Any Other Relevant Details)"

ACC→ TWR:

> ❝ "(Callsign), clearance approved"

Example Phraseology

TWR → ACC:

> "AB213 requests clearance to Fez"

ACC → TWR:

> " "AB213, clearance approved"

If a **level change or route adjustment** is required, APP/ACC will **provide the update** during the exchange.

Important Considerations

- **This coordination is a negotiation**—you can reject or renegotiate clearance requests based on airspace conditions.
- If a restriction is needed, **it is best to take the aircraft on frequency** before issuing clearance.

Types of Departure Clearance Responses

Response Type	Meaning
Approved Without Restriction	Immediate clearance is granted.
Approved With Restriction	Clearance is conditional (e.g., after an arrival lands or before a set time).
Denied	The departure is not possible at the moment; APP/ACC will call back when clearance is available.

Clear understanding of **these responses** ensures **smooth coordination and efficient traffic flow**.

Estimate Coordination (Not Relevant for VATSIM)

In real-world ATC, an **Estimate Call** is used to exchange an aircraft's:

- **Squawk**
- **Handover level**
- **Estimated entry time** into the next sector

Most estimates are **automatically exchanged** through flight data systems, but in **case of system failures or special circumstances**, verbal coordination is required.

Example Scenario: Casablanca (GMMN) to Paris (LFPG)

If the automated system is **unavailable**, controllers must **verbally coordinate all estimates**.

1. **Tower reports the departure time to APP**.
2. **APP calculates the estimated time at the COP (Coordination Point) between APP and ACC**.
3. **APP transmits the estimate to ACC**.

Format for Verbal Coordination

APP → ACC:

> " "ESTIMATE TOLSI AFR123"

ACC → APP:

> " "A320 to LFPG"

APP → ACC:

> " "SQUAWKING 6032, ESTIMATED TOLSI 1509, CLIMBING FL150 <initials>"

ACC → APP:

> " "<initials>"

By confirming the **aircraft type and destination**, both controllers ensure they are referencing the same flight.

Estimate - No Details

A variation of an **Estimate Call** is used when the receiving sector **has no prior flight plan data** for an aircraft.

- This is common in **bad weather diversions** or **unexpected reroutes**.
- Additional flight details must be exchanged to **fill in missing information**.

Additional Details Exchanged

- **Aircraft type**
- **Speed**
- **Requested level**
- **Departure airport**
- **Destination airport**
- **Route**

> **Estimates are not required on VATSIM**, as **Euroscope automatically exchanges flight data**

Expedite Clearance & Revisions

Expedite Clearance

An **Expedite Clearance** is a short-term coordination request, similar to an **Approval Request**.

- Used when an aircraft is **approaching a sector boundary faster than expected**.
- **Replaces a standard Estimate** when coordination time is limited.

When to Use an Expedite Clearance

- The aircraft is reaching the sector boundary **sooner than specified** in agreements.
- The receiving sector **needs to be informed immediately** to adjust sequencing or separation.

Revisions

A **Revision** is issued when there is a **change in the aircraft's estimated boundary crossing parameters** before reaching the sector boundary.

Common Revisions

- **Updated estimated crossing time**
- **Change in flight level**
- **Routing adjustments**

> **Revisions are generally unnecessary on VATSIM**, as Euroscope **automatically updates estimates**.
> Controllers can **monitor changes in real-time** without requiring verbal coordination.

Handover-Takeover

A **structured and informative handover** ensures a smooth transition when transferring control of a sector. This is **especially critical during high-traffic periods and events**, where situational awareness must be maintained.

WEST Principle for Tower Handovers

Category	Explanation	Examples
W - Weather	Any weather conditions that impact operations.	"Heavy rain reducing visibility to 2000m," "Wind gusts up to 35 knots from the west," "Moderate turbulence reported at FL120."
E - Equipment	Mention any operationally significant equipment issues (rarely relevant on VATSIM).	"ILS for Runway 22 out of service," "Transponder issues reported with several aircraft," "Coordination line to adjacent sector is down, using text chat for now."
S - Situation	Describe the current operational environment, including staffing, airspace restrictions, or agreements.	"Ground and Tower online, Approach offline—providing top-down service," "Runway 18 closed for maintenance," "Holding established for arrivals due to congestion."
T - Traffic	List active aircraft and pending actions.	"BAW123 cleared for takeoff, waiting for departure separation," "AFR452 holding at FL150 due to traffic," "DLH789 approaching the boundary, handoff required in 2 minutes."

Structuring Approach and Center Handovers

When conducting **handover between Approach and Center**, follow a **general → specific** structure:

1. **Basic Information** → Area of responsibility, active runways, NOTAMs.
2. **Sector Configuration & Agreements** → Which adjacent sectors are online, special coordination agreements.
3. **Traffic Picture** → Who is on frequency, their current status, any coordination already completed.
4. **Additional Details** → Any reported issues, equipment failures, special operations.

This structured approach helps the incoming controller **gradually build an understanding** of the traffic picture before assuming control.

Handover Completion Process

- The **handover controller remains responsible for the frequency** until the relieving controller is fully ready to assume control.

- **In high-traffic situations, handovers may take several minutes**—the relieving controller should only **assume the frequency when confident in the airspace situation**.

RAWFTO Handover Format

Runways

- Which runways are in use?
- Any recent or planned runway changes?

Airspace

- Any **abnormal conditions** in your airspace?
- Which **adjacent sectors are online**?
- Are any **airspace releases** active?
- Are you **extending control to adjacent sectors**?
- Are you **providing top-down service** to any aerodromes?

Weather

- Any **significant or abnormal weather** affecting operations?
- Is the **Area QNH restricting cruise at FL110** (below 1013 hPa)?

Frequencies

- What **active frequencies** are in use?
- Any **planned changes or handoffs**?

Traffic

- Go through each **jurisdiction and aircraft on screen**.
- Highlight **any pending coordination or outstanding instructions**.

Outstanding Instructions / Other Information

- Any **ongoing coordination** that needs completion?
- Any **frequency transfers still pending**?
- Any **additional notes or situational awareness items**?

Example Handover Exchange

```
"Runway 35R in use for departures, Runway 35L for arrivals at GMMN. GMME Runway 03 for
departure and Runway 21 for arrivals."

"Airspace: GMMM_CTR is online, extending to cover GMMN_APP and GMME_APP. Providing top-down
service at GMMN and GMME. No temporary restrictions or closures. Traffic flow normal."

"Weather: Winds 010° at 12 knots, occasional gusts up to 18 knots at GMMN. Visibility 10km, no
significant weather affecting arrivals. Cloud cover SCT at 4000 feet, BKN at 10,000 feet. GMME
reporting similar conditions with lighter winds at 5 knots from the west."
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"Frequencies: 119.10 and 124.75 active. Handoffs to DAAA_CTR for eastbound traffic above FL250."

"Traffic: RAM213 is taxiing for departure from 35L, IFR to LFPG. ATY502 is descending DCT ORSUP, coordination with DAAA_CTR is done. AFR423 is inbound from the north, estimating BARIS in four minutes. LBY112 is climbing out, handoff needed to the next sector. CN-RGB (a VFR flight) is holding at 2000 feet west of the field for sequencing."

"Outstanding: Just frequency transfers and the handoff for LBY112. No conflicts at the moment."

"Any questions?"