

# GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING

Charting Group  
Meeting 07-01 – May 2-3, 2007

## RECOMMENDATION DOCUMENT

**Subject:** Charting Helicopter RNAV Routes

**Background/Discussion:** In June, 1979, an Advisory Circular was issued titled IFR Helicopter Operations in the Northeast Corridor. This AC was used to provide routes for helicopters flying between Washington DC and Boston, MA. The AC was recently cancelled and the helicopter community is looking for a way to have area navigation (RNAV) routes published that would provide them safe operations from fixed wing traffic and provide efficient flight operations for helicopters, fixed wing aircraft and air traffic control. It would be desirable to have these routes published as public routes and not as Special Operations.

**Recommendations:** The ACF should have an open discussion on how helicopter routes can be published for public use.

Some recommendations may include:

- a. Publish as Tango "T" routes with equipment or speed proposal/requirement.
- b. Publish as Tango routes with annotations in the Legend to restrict for helicopter use only.
- c. Develop a separate designator for helicopter routes such as "Y" or "Z" which are ICAO approved designators.

**Comments:** This recommendation affects ATC, flying community, AFS, AVN, and NACO.

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**Date:** April 4, 2007

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**MEETING 07-01:** Mr. Paul Ewing, ATO-R, submitted this issue to the forum and Mr. John Moore, NACO, recapped the issue. In June 1979, an Advisory Circular was issued titled IFR Helicopter Operations in the Northeast corridor. This AC was used to provide

routes for helicopters flying between Washington DC and Boston, MA. The AC was recently cancelled and the helicopter community is looking for a way to have area navigation (RNAV) routes published that would provide them safe operations from fixed wing traffic and provide efficient flight operations for helicopters, fixed wing aircraft and air traffic control. It would be desirable to have these routes published as public routes and not as Special Operations.

Some recommendations:

- a. Publish as Tango "T" routes with equipment or speed proposal/requirement.
- b. Publish as T routes with annotations in the legend to restrict for helicopter use only.
- c. Develop a separate designator for helicopter routes such as "Y" or "Z" which are ICAO approved designators.

Mr. Moore stated that as far as charting is concerned, we shouldn't have any problems with the specifications but wondered what impact would the addition of these routes have on our charts. Mr. Ted Thompson, Jeppesen, suggested that the entire list of helicopter issues be addressed as a group since they are interrelated. Issues were raised such as the need to address the subject from a greater perspective including the need for official heliport/helipad idents, integration with conventional fixed wing Victor routes, route designation, rulemaking, integration into conventional IFR Enroute charts or create new special helicopter-only chart series. Jeppesen's position is that helicopter routes must have unique identifiers (Y or Z) to differentiate them from conventional fixed wing routes (databases, electronic data-driven charts, flight planning, etc.).

Mr. Paul Ewing will ask HAI to write a letter to the ATO. Mr. Ewing will chair a subcommittee to address any HAI requirements. Certain questions will need to be addressed such as, will these be Regulatory or ATS Routes? Mr. Eric Secretan, NACO, stated that in today's budget environment, NACO could not take on the unfunded mandate of creating a new series of charts. Mr. Ewing responded by saying that they would prefer the routes be published on existing charts. Mr. Tom Schneider, AFS-420, asked what are the options given no new chart series, change scale of existing charts? Another question asked was, how many routes could be developed? Mr. John Timmerman remarked that if these were deemed regulatory routes, then rule making would be an issue.

Mr. John Moore acknowledged the need the more information on the table before any decisions can be made. Mr. John Timmerman stated that he believes the charting forum is the wrong place to start. HAI needs to write to ATO to request a new capability that doesn't exist today.

Mr. Paul Ewing will proceed by committee, including Mike Webb and Barb Cassidy. Mr. Ewing said that he could take the issue back and have HAI write a letter to ATO and work in parallel with the ACF.

**ACTION:** Paul Ewing will ask HAI to write a letter to ATO.

**ACTION:** Paul Ewing to chair a Helicopter RNAV route to meet as necessary. This sub-workgroup will work in parallel with the ACF to deal with the issues

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**MEETING 07-02:** Mr. Paul Ewing, ATO-R, submitted this issue to the forum and Mr. John Moore, NACO, recapped the issue. In June 1979, an Advisory Circular was issued titled IFR Helicopter Operations in the Northeast corridor. This AC was used to provide routes for helicopters flying between Washington DC and Boston, MA. The AC was recently cancelled and the helicopter community is looking for a way to have area navigation (RNAV) routes published that would

provide them safe operations from fixed wing traffic and provide efficient flight operations for helicopters, fixed wing aircraft and air traffic control. It would be desirable to have these routes published as public routes.

Options include:

- a. Publish as RNAV T Tango Routes with appropriate equipment/usage requirements.
- b. Publish as RNAV T Tango Routes with annotations in Legend materials restricting to helicopter use only.
- c. Develop separate ICAO approved route designators (X-Ray or Yankee) to differentiate helicopter RNAV routes from conventional fixed wing routes.

Issues were raised such as the need to address the subject from a greater perspective including the need for official heliport/helipad identifiers, integration with conventional fixed wing Victor routes, route designation, rulemaking, integration into conventional IFR Enroute charts or create new special helicopter-only charts.

Jeppesen's position is that helicopter routes must have unique identifiers (Y or Z) to differentiate them from conventional fixed wing routes (databases, electronic data-driven charts, flight planning, etc.).

Air Traffic and the Helicopter Association International (HAI) wants "ATS" (direct) routes in the NAS, mainly in the Northeast Corridor (Washington DC to New York). There might be some requirement in Southern California as well. These routes would require regulatory action.

Users want to have the routes charted on existing Low Altitude Enroute/Area charts. Concerns were expressed about chart congestion. According to Paul Ewing, the number of additional routes is not extensive (15-20).

These routes will be restricted to helicopter use only. The routes might begin or end at waypoints not suitable for fixed wing aircraft. At issue is how to distinguish these helicopter-only routes from conventional, fixed-wing routes.

NACO's Enroute branch created a prototype chart showing how these routes might appear on a chart. They used color to distinguish helicopter routes (e.g. green).

Additional research into options for unique airway designators (route prefix or suffixes) is recommended. Coordination within the FAA, with ICAO, and ARINC coding is necessary before a final decision.

**ACTION:** John Moore took an IOU to Paul Ewing regarding ICAO route prefixes available.

**ACTION:** Adrienne Funk will investigate the ARINC coding aspects of Helicopter RNAV routes.

**ACTION:** Ted Thompson will report on Jeppesen's experience with helicopter routes.

**MEETING 08-01:** Mr. John Moore recapped the issue originally submitted by Mr. Paul Ewing, AMTI. ICAO Annexes say Helicopter RNAV routes are allowed to use the prefix letter K. Combined prefixes are also allowed (e.g. TK000). Prefixes are also allowed in ARINC coding. According to Mr. John Kasten at Jeppesen, an ARINC record allows for a route type field that can be defined as helicopter only. It would actually look like a T-Route on the charts but would be for helicopters only. There is no TERPs allowance for helicopters. The question was asked how would routes be created? Routes will be

regulatory and the requirement will be received from Mr. Ewing's office. Mr. Paul Gallant, FAA/AJR33, will have to validate that in Rule Making. Mr. Frank Flood, Air Canada, agreed to check with an automation expert to see if these routes can be filed.

**ACTION:** Greg Pray, NFDC will have to ensure that NASR can accommodate these designators.

**ACTION:** Ms. Valerie Watson, FAA/NACO will write an RD for charting after receiving route ident format confirmation from Airspace & Rules. She will also confirm ARINC route coding.

**Deleted:** Ms. Valerie Watson, FAA/NACO will provide specs to Mr. Ewing and write an RD for charting.

**ACTION:** Mr. Paul Ewing AMTI, will report back on the status at the next ACF

**MEETING 08-02:** Mr. John Moore, FAA/NACO, recapped the issue originally submitted by Mr. Paul Ewing, AMTI. ICAO Annexes say Helicopter RNAV routes are allowed to use the prefix letters "TK". Mr. Paul Gallant, Airspace & Rules, confirmed within the FAA that the combined prefix of "TK" for helicopter route idents is acceptable. The combination is accepted for the NASR database (per Greg Pray, FAA/NFDC), and would also conform to Jeppesen's ARINC database format as well (per Kyle Jermyn, Jeppesen). Paul Ewing confirmed that the routes would be GNSS Required.

Paul Ewing reported that a Notice of Proposed Rulemaking is being addressed within the Airspace and Rules branch of the FAA. He commented that other countries would need to know about these new routes. Air Traffic coordination will define what the requirements are.

Mr. Paul Gallant, FAA/Airspace & Rules, indicated that the establishment of new helicopter routes would require rulemaking (Docket action). The RNAV/RNP Office will provide comments to Airspace and Rules.

Currently, there are two helicopter routes between Boston and New York and two between New York and Washington, DC that are ready to be published. Mr. Mike Webb, FAA/AFS-420, commented that the Helicopter Association Intl (HAI) is putting together a working group to take advantage of what is being done.

**ACTION:** Mr. Paul Gallant, FAA/AJR-33 will report back at the next ACF. Valerie Watson (NACO) will draw up required IACC specification change documents to allow charting of these routes on IFR Low Enroute and VFR products.

**MEETING 09-01:** Mr. Paul Gallant, FAA/Airspace & Rules, announced that the RNAV-RNP office has decided not to pursue the unique TK route designation due to various factors and therefore recommended closing the issue. Mr. John Moore, FAA/NACO, questioned Mr. Paul Ewing, FAA Air Traffic RNAV-RNP, as to the reason for the pushback, noting that the TK designator conforms to ICAO applications. Mr. Ewing stated that Air Traffic would determine which aircraft may or may not be allowed to use the specific T routes. Mr. Richard Boll, NBAA, questioned how the operator of a fixed-wing airplane would know which T routes he could file for and which ones are intended for helicopter use only. After some debate, the consensus was that unique identification of the routes was desired. Mr. Ewing said he could go back to his office for coordination and to get a letter of concurrence or non-concurrence. If RNAV-RNP agrees a requirement exists to proceed with the use of the TK designator, they would provide the specific route information to the Airspace & Rules Group along with a request to begin the rulemaking process. Ms Valerie Watson, FAA/NACO, will wait for a decision on the matter before writing the IACC RD.

Mr. Geoffrey Waterman, NGA, reminded everyone that during these strict financial times, all IACC decisions were weighing the cost against the benefit. Modifications to their (NGA's) database must be worth the cost before they will agree to any changes.  
**ACTION:** Mr. Paul Ewing, FAA/AJR-37 will report back at the next ACF.

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**MEETING 09-02:** Mr. Paul Ewing, FAA/Air Traffic RNAV-RNP, reported that the FAA has formally decided to use the prefix "TK" to designate Helicopter RNAV routes. Mr. Ewing will coordinate with Ms. Valerie Watson, FAA/AeroNav Services, regarding the IACC specifications. The goal is to have the FAA charting and database specs in place prior to actual rulemaking for the first helicopter route.

Mr. Mike Hilbert, FAA/AJR-37, will provide Ms. Watson with a list of locations where TK routes are planned. Ms. Watson will circulate the list for planning purposes within the FAA, with a copy to Mr. Ted Thompson, Jeppesen.

At the present time, there is one TK helicopter route planned for use in the U.S. Northeast. It is estimated that there might be as many as 200 such routes in the NAS in the future. Some discussion followed concerning the potential for increased chart clutter on IFR enroute charts.

**ACTION:** Mr. Paul Ewing, FAA/AJR-37, will report back at the next ACF.

**ACTION:** Ms. Valerie Watson, FAA/AeroNav Services, will draft an IACC RD for coordination and report back on its status at the next ACF.

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**MEETING 10-01:** Mr. Mike Hilbert, FAA/AJR-37, reported the first 2 routes are almost complete and there may be up to 7 routes in the D.C. area. Mr. Hilbert will coordinate with Ms. Valerie Watson, FAA/AeroNav Svc, prior to NPRM and request prototypes to ensure charting will not be effected by excessive routes. Mr. Hilbert also noted that there are 2 types of helicopter routes – public routes which are charted and special routes which are not. Mr. Ted Thompson, Jeppesen, expressed concern about; (1) how to deal with the special routes in the NAS, (2) how to track and chart the public vs special routes and (3) how would a user know if a route was a special?

Mr. Paul Ewing, AMTI/AIR-37 responded that specials could be VFR only and could be implemented via LOA and not placed on a public chart.

Mr. Mike Webb, FAA/AFS-410 noted that Oregon, Tennessee, and Georgia are working on new helicopter routes and that he would provide any information on the routes with Ms. Watson prior to publishing.

It was noted by Mr. John Moore, FAA/AeroNav Svc, that special routes may need to be addressed in a separate issue and may be brought back to the ACF if needed but this issue should be closed. The forum agreed.

Mr. Thompson asked Ms. Valerie Watson to provide a copy of the Requirements Document to Jeppesen.

**STATUS: CLOSED**