

ALL ITEMS DISCUSSED WERE FOR CONSIDERATION AND FEEDBACK IN FORMING A PROPOSAL AND ARE PRELIMINARY IN NATURE

**Digital Products Meeting
December 13, 2011**

Fred Anderson presented the background and challenges with digital aeronautical products to include the legislative history dating back to 1926.

Key Points:

- The legislative authority for the FAA to charge fees for aeronautical products is provided in 49 USC Section 44721.
- The Federal Aeronautical Charting Program has always been fee-based since it started in 1926.
- AeroNav Products needs to recover \$5M for the compilation and database management of digital aeronautical products in order to sustain the program and make sure up-to-date and accurate products are always available.
- AeroNav Products is operating under an Office of Management and Budget-approved High Performing Organization Plan which provides for significant cost cutting and revenue increase to recover allowable costs.
- Based on Public Law 99-272, prices of aeronautical charts almost doubled between 1986 and 1988. Based on a dollar amount, this increase was significantly greater than what we are discussing for digital products. Reports to congress showed there was no impact to aviation safety from the price increases.
- Input from this meeting is going to be used to develop a proposal for FAA Senior Leadership in January 2012. The proposal will certainly be shared with the public prior to any final decisions or implementations are made.
- ***Based on feedback from the meeting and after, the estimated number of users as well as the cost per user is being reworked and it is anticipated this will lower the price to each individual user.***

Eric Secretan presented the suite of digital aeronautical products and examples of potential "Special Service" products.

Key Points:

- Reviewed the standard digital product suite that will be available to all digital product agents.
- Digital US Terminal Procedures Publications will be geo-referenced and added to the standard digital products suite around the end of 2012.
- A new Seamless US Sectional digital chart will be provided as part of the standard digital products suite at the initiation of the new digital product distribution process.

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- A new seamless US IFR Enroute chart will be added to the standard digital product suite later this year or early 2013.
- Additional enhanced digital products consisting of AeroNav Products' production files that can be used in unique value-added applications by digital agents will require a special services agreement and can include an optional non-disclosure agreement if so desired by the digital agent to protect company competition sensitive information.
- Special service agreement fees are based on the direct cost recovery for AeroNav Products to provide the specific unique production product to the digital agent.
- Industry was invited to provide suggestions and/or input on best practices for AeroNav to deliver the digital aeronautical products each production cycle to the digital agents.

Debra Sullivan presented the pre-proposed pricing methodology.

Key Points:

- AeroNav Products must comply with legislation and the High Performing Organization Plan to attain fully allowable cost recovery of compilation, database management and distribution of digital aeronautical products. This ensures the sustainment of the program and that up-to-date relevant products are readily available to the public.
- The program needs to recover only the allowable cost of producing the digital product, which equates to approximately \$5M for FY12.
- Pre-proposed pricing was based upon the assumption that 100,000 to 120,000 customers purchasing subscriptions to single digital product units (i.e., Airport/Facility Directory, IFR Enroute, US Terminal Procedures Publications and VFR Aeronautical Sectionals).
- **Note:** Although the option for a total digital package was presented, the pricing projection only included a *very small percentage* of customers purchasing the entire digital product package, as AeroNav assumed the majority of customers would opt for individual digital product units.
- The *pre-proposed* cost presented for the digital products were as follows: Airport/Facility Directory \$15 per year, IFR Enroute \$37 per year, Terminal –TPP \$48 per year and VFR Aeronautical \$49 per year. The *pre-proposed* cost of the total package of our Aeronautical Products was presented as \$150 per year (**This includes all VFR and IFR Charts and all Supplemental Publications for a year**)
- The same *"total package"* coverage in paper format is currently over \$3,700 per year.
- Each digital product methodology included two options: Option 1 – Flat rate per unit / per end customer; Option 2 – Tiered rate based on total number of digital

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product customers with decreasing per unit cost as total customer numbers increase

- Discussion emphasized the pricing was *estimated* and the final pricing would be dependent on the further refined end user numbers and assumption patterns (i.e., how many actual digital consumers and what products they are consuming); and the pricing options presented were only two options and other pricing options could be open for discussion.
- Feedback at the meeting indicated interest in possibly breaking the digital product units down further (possibly by areas or states). Feedback also surrounded the actual numbers of end users.
- Also, not included in the initial pricing methodology and pricing structure are the view only customers, therefore, this should be considered in the proposal being developed

Abigail Smith presented the pre-proposed agreement for digital aeronautical products.

Key Points:

- Digital Aeronautical Products Agent agreements will be required for any company wishing to distribute our products – they are based on the current Chart Agent Agreements and are standard for digital agents
- Pricing methodology for the standard digital products will be the same for all Digital Chart Agents
- **Non-Disclosure Agreements are not required of any company** – the purpose of the agreement is to permit interested companies to discuss their requirements for their future product development with assurance of our sensitivity to market competition and to engage in open dialogue and exchange of the array of production files that AeroNav has available to spur innovation and usage by the developers.
- Special Services Agreement – an optional agreement for any interested company who would like to use our production files in ways that support safe navigation; pricing is based on cost recovery for the work on this product.
- *This is not a research and development initiative by AeroNav, rather, the ability of developers to capitalize on our current production files or part of production files in unique ways for supporting safe navigation in their market niche.*
- Digital Agents may **ONLY** distribute the products covered in the agreement in digital formats. *We currently have an agent network distributing our paper products; any company wishing to distribute paper products may apply to become a paper Chart Agent.*
- Copyright, encryption, or other methods to protect the digital aeronautical products from unauthorized use is required for Digital Agents. The intent is to prevent unauthorized use or distribution of digital AeroNav Products.

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- Digital Agents have up to one year to establish the net purchase requirement of \$10K in digital aeronautical products to maintain their agent status and understand it is not an exclusive franchise agreement. The intent is to create a minimum purchase structure low enough to encourage innovation and competition to allow for as many digital agents as possible.
- Fee methodology based on digital agents' end users/subscribers with a requirement for quarterly reporting. Discussion concerned the need for cost recovery for each individual using FAA's AeroNav Digital Products, whether directly or indirectly from an agent. AeroNav understands that several digital distributors have sub-distributors and this article emphasized the end point of the distribution chain. Feedback during the meeting and following indicated that more consideration needs to be given to allowing subagents.
- Digital Agent must have a quality assurance and feedback structure in place to ensure all end users and the FAA receive notification of any errors. A digital agent feedback network is an important aspect of maintaining defenses in depth in our safety management program.
- The technical content and any critical navigation information must not be omitted from the digital products. For over 4 decades, intergovernmental organizations have established requirements for information that must be displayed on products for navigation safety. We have a duty to protect the integrity of these products and aviation safety.
- Digital Agents must supply AeroNav Products one subscription/copy of each product and have accounting structure available for auditing up to 3 years to ensure compliance with agreement. AeroNav is not a regulator; AeroNav is managing the voluntary contractual agreement.
- Prohibited from distributing obsolete products. Clearly, this is a safety mandate.

Following the presentations, industry groups had a working lunch and additional time to discuss 1) comments on the pre-proposals, 2) suggest ideas for implementation, 3) identify alternatives for mutual success. Following this discussion table groups appointed a spokesperson or persons to report to the entire group. At the request of some of the participants, we did not attribute names or company affiliations with the feedback that the groups provided.

Group report out summaries:

Group One

1. Group would like to have the financials – *HPO financials are on our website under the Alerts tab on the left hand column.*
2. Have the FAA create a subscription fee with discreet key codes; companies honor authentication code.
3. Key sharing is fairly straight forward to audit and control and helps address the complications of things like product returns.

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4. Have existing chart agents sell the key to the end users.
5. Industry developers want to try to avoid a 1 year reengineering phase.
6. Group favored flat pricing and does not support a tiered pricing model.
7. As technology continues to advance, it is only a matter of time before people start flying via iPad/technology in real time.
8. If the FAA sets up a key system, the FAA has to consider the cost of operating that system.

Group Two

1. \$150 per user is too high.
2. Need assurance the FAA website will not be a way that users or unauthorized distributor cannot by-pass the new processes in the FAA website. Recommend the FAA website have a watermark "NOT for NAVIGATION".
3. The group recommended additional pricing such as "by chart" fee.
4. Concerned about the encryption/copyright.
5. AeroNav should have a lot of digital product agents.
6. Need try to find a way to determine the number of actual end users.
7. What is a user?
 - a. Some are website and some are applications.
 - b. The lines are becoming very blurred between the two.
8. The timeline for implementing this is too short. *AeroNav Products is open to adjusting the schedule as needed*
9. Web-only service providers are looking for a lower cost.
10. Need to consider that users buy multiple applications.

Group Three

1. The group recommended the FAA charge per view on its website.
2. The pilots that fly in local areas need the ability to download only the charts they need.
3. The subscription model would still need the ability to get just one chart.
4. If you are not going to turn off the free FAA viewable charts it will be very difficult to get the digital agent network going.
5. AeroNav could have the current 400 chart agents sell the subscription/key.

Group Four

1. There are a lot of great ideas but do not want the government in our business as much.
2. Think it is important to break the cost down further to per chart/region, etc...
3. Recommending tier system.
4. Who is going to be responsible for the copyright/encryption oversight?

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Group Five

1. The key method has the advantage of taking the heat off the digital industry
2. Pricing as it has been presented is not going to provide the \$5M revenue under the tier process.
 - a. Need to be a flat level admin fee with a user fee
 - b. The tier pricing is very unfair to the small companies
3. What does a user constitute?
4. Really like the idea of the chart agents selling the subscription/user key.
5. There are definitely some apple iTunes issues that will need to be worked out.
6. Many of the users are VFR users only.

Questions and Answers:

Q: What guidance is provided for cost recovery versus safety?

A: 49 USC 44721 permits FAA to recover costs for the aeronautical charting program. While it does allow the agency to adjust the prices to recover costs, this legislation also allows the agency to adjust prices to ensure safety. Based on public law 99-272 enacted 1986, Aeronautical Charting prices almost doubled between 1986 and 1988. Three years of annual reports to congress concluded that there was no impact to safety and there was no decline in chart sales. Furthermore, based on a dollar amount, that increase was significantly greater than any increase discussed at the meeting today.

Q: Are you including cartographic work in compilation?

A: Yes; cartographic work and compilation are the same thing. Compilation is the process of taking aeronautical data and information and compiling it into aeronautical charts and publications. In the federal mapping and charting community compilation and cartography are interchangeable.

Q: Will the \$5M need to recover change from the first year amount in subsequent years?

A: AeroNav Products knows that our paper product sales will decline over time and our digital sales will increase over time; as the customers shift from one format to another, we will make adjustments accordingly, and may need to recover a larger portion of our fee structure in the future to realize fully allowable cost recovery in accordance with the High Performing Organization plan approved by the Office of Management and Budget. The more users there are for aeronautical products the more the costs are shared.

Q: Will Jeppesen have to pay?

A: Anyone who wants to be a digital agent will have to pay the same fees for the products.

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Q: Are you selling aeronautical navigation products or an application?

A: AeroNav Products does not and will not be building and/or selling an application; industry has the talent and innovation to provide continuously evolving state of the art applications. AeroNav Products is committed to keeping up-to-date, relevant aeronautical navigational charts and related products on the market – we need to stay as efficient as possible as an organization and are not interested in diverting funding away from our core work: aeronautical navigation products.

Q: Would the special products carry the indemnification from 49 USC Section 44721?

A: DOT/FAA Council was inclined to say yes, but would need to complete thorough legal review before committing to an answer.

Q: Is everyone expected to sign a Non-Disclosure Agreement?

A: ***NO***; Non-Disclosure Agreements are not required of any company; they are optional (to protect the competition sensitive needs companies and to ensure the responsible use of sample production files being supplied).

Q: With a Special Services agreement, would there be “per user” fees as well?

A: Fee structures for special services products must clearly be delineated in other transactional agreements (OTA). AeroNav Products would charge for the cost recovery associated with the work, which would have to include that product's share of the compilation, production, and database management costs.

Q: Are the digital costs going to subsidize the paper costs?

A: No; our fee structure is intended to assess appropriate amounts for each paper and digital user to pay their share of data base management, compilation, production, and dissemination cost recovery.

Q: If industry groups come up with \$5M today in this room, can we conclude the meeting and dismiss?

A: In theory we could; however, the FAA would have to look at the way to make the \$5M assessment work equitably for the public; AeroNav Products is committed to equitable pricing structures. AeroNav Products would still need to have the agreements in place with industry especially to address the appropriate usage of our aeronautical product suite (i.e., to eliminate removing critical navigation information). AeroNav Products wants to ensure that we address the long term sustainment of the aeronautical navigation charting program as users shift to digital products.

Q: Several websites have shut down – have you done a study to find out how many jobs will be lost?

A: The aeronautical charting program has always been a fee based program. AeroNav Products has always been an organization that supports small businesses. Currently,

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we have a net work of 400 authorized chart agents who distribute FAA Aeronautical Products worldwide. Any changes to the digital product distribution processes need to consider the impacts on industry.

Q: Will the hacker continue to undercut you?

A: AeroNav Products will only distribute our digital products to the companies with whom we have a digital agreement; this process is to create a network of authorized Digital Agents. As partners in this process, Digital Agents and AeroNav Products must work together to eliminate the unauthorized use of our products.

Q: If I want to pursue the compilation business, can I buy the binary data from you?

A: The individual aeronautical data elements are available at no charge from the FAA (i.e., airport, NAVAIDs, Fixes); AeroNav Products' fees are for the actual compilation/cartography, database management, production and distribution of the aeronautical products.

Q: How will web-based view-only services be effected by this change in distribution?

A: The FAA will always need to provide some basic aeronautical navigation products for review on its website; we also recognize there are similar commercial websites that are important to our industry. We need to work collaboratively to establish an equitable fee methodology and governance rules for ensuring that we do not by-pass our digital aeronautical chart agents with these sites.

Q: What guidance is provided for cost recovery versus safety?

A: The FAA and all the potential digital aeronautical product agents are committed to safety. 49 USC Section 447721 does allow the FAA Administrator to adjust prices to avoid any adverse impact on aviation safety. Any changes to the digital aeronautical chart distribution process must consider safety impacts.

Q: Service providers already have subscribers with set prices. Will these subscribers be grandfathered in for this new fee system?

A: AeroNav Products is going to implement the fee structure in a timely manner to ensure the continuity and sustainment of the aeronautical charting program. We are committed to working collaboratively with our digital chart agents to minimize the impact on their personal businesses and the users.

Q: What if company sells less than the pre-proposed \$10K minimum in FAA products?

A: In the current chart agent model, we have a provision for subagents and want to have a similar model available for the digital agents; we could consider lowering the minimum, if necessary. Finally, we want to ensure that all digital agents have up to one year to generate that revenue.

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Q: Would the current chart cycles be changed to real time for digital products?

A: ICAO charting cycles must to be considered when discussing the updating of aeronautical products. AeroNav Products recognizes with digital aeronautical products the way that we implement these charting cycles needs to evolve. As an example, the current publication schedule for sectional aeronautical charts was based on the need to balance the workload for printing them. We are very interested in collaborating with industry in transitioning publication schedules to better support digital products.

Meeting Conclusions:

The group gave input as to what AeroNav Products was posting on the website and agreed to the following statement:

AeroNav Products hosted a meeting on Dec. 13, 2011, for companies interested in distributing our digital product line in the future. The meeting goal: to collaboratively discuss options for FAA's AeroNav Products to develop a proposal to best distribute digital products.

Highlights of the meeting included:

- Legislative history of the aeronautical charting program dating from 1926 to the present.
- 49 USC Section 44721 provides for the collection of fees for the purpose of reimbursing the government for the costs of creating, printing, and disseminating aeronautical products and services.
- AeroNav Products' High Performing Organization requirement, approved by OMB, to develop a digital products strategy delineated in the plan.
- Need to protect the technical content and critical navigation information embedded in the digital products.
- Current digital product revenue cannot sustain the charting program.
- AeroNav Products needs to recover \$5M for the first year and the price of digital products needs to be set at a rate to recover these costs.
- Industry groups presented multiple pricing structures to recover those costs and more work is necessary to determine the pricing.
- AeroNav Products is committed to continuing to provide digital aeronautical products to support new and innovative technologies for pilots.
- Based on the input from this meeting and other information we've gathered, AeroNav Products will develop a proposal for the sale and distribution of digital products and will make this proposal available to the public.