No. 2010-20
9 April 2010

# Hot Topic

**Update on major accounting and auditing activities**


# Revenue recognition on the sale of virtual goods

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## Background

Historically, many online game operators generated revenue by charging users a monthly subscription fee or a fee for premium services. More recently, operators of social games, virtual worlds and massively multi-player online role playing games increasingly have adopted or transitioned to a free-to-play model. Under this revenue model, the online game operators offer games for no charge and provide users the option to purchase virtual goods to enhance their game-playing experience. Virtual goods are non-physical objects within the game represented by pictures, animations or three-dimensional objects. Virtual goods also include purchased characteristics that provide a user with additional or enhanced abilities (such as speed, strength or health) within a game.

Many online game operators facilitate the sale of virtual goods by incorporating a virtual currency within the online game. Virtual currencies generally are earned either through user actions, progress within the game or purchased for cash. For example, virtual currency can be earned by completing an action for an advertiser (e.g., completing a marketing survey, subscribing to a mailing list or a signing up for a free trial for an unrelated vendor's service).

This publication focuses on the different revenue recognition methods applicable to the sale of virtual goods for cash (or purchased virtual currency) in a free-to-play game environment.

## Authoritative revenue recognition guidance

Online games provided under a free-to-play model represent hosted software applications for which users generally do not have the ability or the right to take possession of any software. Online game operators look to ASC 985-605-55-121 through 55-125 (formerly EITF 00-3, "Application of AICPA Statement of Position 97-2 to Arrangements that Include the Right to Use Software Stored on Another Entity's Hardware") to determine if they are in the scope of ASC 985-605, *Software Revenue Recognition* (formerly AICPA Statement of Position No. 97-2). The application of these paragraphs generally results in the conclusion that ASC 985-605 does not apply to online games and the corresponding sale of virtual goods.

In the absence of other specific revenue guidance applicable to sales of virtual goods (i.e., ASC 985-65 does not apply), SEC Staff Accounting Bulletin Topic 13, *Revenue Recognition* (SAB Topic 13) would apply to these transactions. Pursuant to SAB Topic 13, revenue is recognized when persuasive evidence of an arrangement exists, the seller's price to the buyer is fixed or determinable, collection is reasonably assured and delivery has occurred or services have been rendered.

The evaluation of when each of the criterion contained in SAB Topic 13 is met will depend on the specific facts and circumstances of each arrangement and often will require judgment. However, we find that online game operators using a free-to-play model generally meet the criteria to have evidence of an arrangement, a fixed or determinable fee and reasonably assured collection at the time a user purchases the virtual currency[1] or the virtual good. The arrangement is generally evidenced by the terms and conditions that a user agrees to when purchasing virtual currency or virtual goods. Further, at the time the virtual currency or virtual goods are purchased, the fee is often readily determinable and collection is assured. This is because online game operators generally do not provide users with any refund rights for their purchases of virtual currency or virtual goods and payment is made immediately. The terms and conditions for the sale of virtual items typically state that the game operator is under no obligation to continue hosting the game for users that purchased virtual currency or virtual goods and that users have no ongoing rights to the virtual currency or virtual goods.

Therefore, at the time the virtual currency or virtual good is purchased, generally the only remaining revenue recognition criterion to be met is that of delivery.[2] In most situations, a game player purchasing a virtual good expects that good will be available anytime he or she plays the game (i.e., the period of delivery for the virtual good is not clearly defined). As described further below, the revenue recognition model selected by the company is dependent upon the company having the appropriate data to support its recognition model.

There are three different revenue recognition models for the sale of virtual goods seen in practice: the game-based revenue model, the user-based revenue model and the item-based revenue model. Each of these models, as discussed in more detail below, utilizes different estimates of the appropriate period for the recognition of revenues associated with the sale of the virtual goods. The period of recognition is determined based on the type and extent of data available on virtual good and game player usage patterns. It is important to note, however, that the company must select the model that is appropriate for its particular facts and circumstances and the ability to utilize accelerated models (e.g., user life versus game life) is dependent upon data being available to support its underlying assumptions.

Note, the accounting discussed in this publication assumes that the virtual currency and/or the virtual goods cannot be sold or traded among users within the game. If the game provides users the capability to trade virtual currency and/or virtual goods, the company would have to consider the effect of that feature on its game player usage patterns. (That is, this feature may indicate that it is not appropriate to base revenue recognition on a single player's expected user life as a virtual good may transfer from user to user.)

The remainder of this publication discusses each of these three models and provides factors to consider in determining the appropriate model for a given set of facts and circumstances.

## Game-based revenue model

Under this model, the company recognizes the revenue generated from the sale of virtual goods ratably over the estimated remaining life of the game, and no distinction is made for the "characteristics" of the virtual good. For example, Gaming Co. launches a new game that has an expected life of five years. At the beginning of year two, Gaming Co. sells a virtual good to a user. Gaming Co. would recognize the proceeds associated with that sale as revenue ratably over the remaining four years of expected life of the game.

## User-based revenue model

The user-based revenue model (UBRM) is based on the presumption that the period of delivery for the virtual good is the estimated average user life. Generally, the average user life is a shorter period than the expected game life, resulting in the recognition of revenue over a shorter period under this model as compared to the game-based revenue model.

However, a key criterion for using the UBRM is that the company must have sufficient data related to normal usage patterns of its paying game players in order to demonstrate it can make a reasonable estimate of the average user life. As discussed further below in the section on making estimates, it may be challenging for a company to determine estimated user lives depending on the sophistication and specificity of a company's data collection efforts and information systems capabilities. If a company does not have the ability to estimate the user life, the application of the UBRM would not be appropriate, and revenue from the sale of all virtual goods should be recognized ratably over the estimated game life based on the game-based revenue model described above.

[1] The sale of virtual currency itself does not represent the culmination of the earnings process for the game operator.

[2] The balance of this article assumes that the arrangement meets the evidence of an arrangement, a fixed or determinable fee and reasonably assured collection criteria. Additionally, this discussion assumes there are no stated contractual terms for the game life or the availability of the virtual good purchased.

Under the UBRM, no distinction is made in the recognition of revenue based on the characteristics of the virtual goods sold. Consequently, revenue from the sale of all virtual goods is recognized ratably over the estimated user life.

## Item-based revenue model

The item-based revenue model (IBRM) is the most complex model of the three. Unlike the game-based revenue model and the UBRM, the IBRM takes into consideration the characteristics of the virtual good sold to determine the (implied or explicit) period that the virtual good is made available to the user ("delivery obligation period"). As discussed further below, the delivery obligation period frequently will vary depending on the category of virtual good involved. Once the delivery obligation period has been established, revenue is recognized ratably over that period of time. In some cases, the estimated delivery obligation period for a particular category of virtual good is shorter than the estimated user life. This results in revenue recognition for the sale of virtual goods over a shorter period than that used under either the game-based revenue model or the UBRM.

However, in order to apply this model, a company has to have the ability to make reasonable estimates regarding the delivery obligation period for each type of virtual good. Making these estimates requires a company to collect extensive data related to game player usage patterns for each type of virtual good.

Most companies that apply the IBRM categorize virtual goods as either "consumable" items or "durable" items. Consumable items are goods that can be consumed by a specific action such as drinking a virtual coffee or using virtual fuel for a virtual vehicle. Once the user consumes the virtual good (i.e., drinks the coffee and uses the resultant changes in characteristics until they wear off or uses the fuel to power the virtual vehicle), the delivery criterion for that virtual good is met. As a result, revenue is recognized for consumable virtual goods when the goods have been consumed (i.e., are no longer available) by the user as the delivery obligation period for that good has ended. However, if the consumed item provides an ongoing effect after being consumed, it would follow the durable goods model noted below. It is important to note that the application of this model would not be appropriate if the game operator lacks sufficient data to track the consumption of these virtual goods.

Durable items are goods that are accessible to the user or enhance the user's game playing experience over an extended period of time. Examples of durable goods include virtual vehicles, furniture and weapons. When a user purchases a durable virtual good, assuming that the virtual item only can be used by the user in that same game operator's environment, the user generally expects that the purchased item will continue to be displayed within the online game as long as that user plays the game. Consequently, we believe that the delivery criterion for many durable virtual goods is generally met ratably over the expected delivery obligation period which, in this case, is the estimated user life. A game operator must have sufficient data available to make reasonable estimates regarding expected user life in order to apply this model.

## Making estimates

In order for a company to select either the UBRM or the IBRM, the company must have the ability to make reasonable estimates about certain user patterns of the game player. For example, the UBRM requires a company to be able to make reasonable assumptions about the expected user life, while the IBRM requires a company to be able to determine the expected delivery obligation period for the different categories of virtual goods. Companies that lack the ability to make these estimates must use the game-based revenue model previously discussed.

In determining average user life, companies will need to determine the average period of time between the date the user first purchases a virtual good and the date the user last logs into the game. Although the date of first purchase can be objectively determined, the last log-in date is more difficult to determine. For example, it may be difficult to determine the last log-in date as it isn't unusual for a user to cease playing the game for a period of time but later resume playing the game. A company will have to use judgment and data to support when user inactivity actually reflects that the user has stopped playing the game.

The use of the IBRM requires a number of estimates relating to the delivery obligation period for each type of virtual good sold. For example, a company using the IBRM will have to be able to estimate the average period of time between when a user purchases and "consumes" a consumable virtual good. In order to make these estimates, extensive efforts to retain, collect and analyze user behavior data is required. While not a comprehensive list, we believe the following user behavior data is necessary when considering the application of the IBRM:

- Separate identification of virtual goods purchased by users with virtual currency that was purchased with cash, versus virtual goods purchased with virtual currency earned for user actions
- Specific identification of revenue by type of virtual good (i.e., consumable item or durable item)
- For consumable items, the dates that the virtual goods are purchased and the date that such items are consumed
- For durable items that are recognized over the delivery obligation period, the dates of original purchase of the virtual good and the date of the user's last log-in

## Summary

As described above, it is clear that each of the identified models (game-based, UBRM and IBRM) can have significantly different accounting results in relation to the timing of revenue recognition. The determination of which model may be applied in a given situation is a facts and circumstances determination and one that has to be made at the game offering level. Companies should carefully assess their particular facts and circumstances, including the company's ability to make reasonable estimates about user patterns based on available data.

The free-to-play model and the sale of virtual goods is a new and evolving industry. Development of new products and changes to the business model will continue to raise challenges on the best manner in which to account for these transactions.



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SCORE No. BB1929