Gold Efficiency

Ability Haste Gold Efficiency: Why is it fake and why CDR% is better?

Gold efficiency is typically calculated based on the cheapest items that provide a given stat.
For **Ability Haste (AH)**, the item is **Glowing Mote** (costs 250 gold, 5 AH).
This leads to the assumption that 1 AH = 50 gold.

However AH has decreasing efficiency - the more AH you have, the less CDR% you get.

Example 1: Glowing Mote

10 Glowing Motes = 50 AH = 2500 Gold.
50 AH gives ~33% CDR.
That means **1% CDR = ~75 gold** (on average).

But if we break it down:

The first 5 AH gives ~4.8% CDR (worth ~250 gold).
The second 5 AH gives ~4.6% CDR (worth ~240 gold).
By the 10th Mote, 5 AH might only add ~2.5% CDR (worth ~130 gold).

The marginal value decreases as you stack more AH, proving the "1 AH = 50 gold" rule is not consistent.

Example 2: Ornn's Upgrade (Luden's Companion → Masterwork Luden's Companion)

Before upgrade: 83 AH = 45% CDR.
After upgrade: 99 AH = 50% CDR.
Upgrade grants 16 AH, which looks like 800 gold value (16 * 50).

But in reality:

The upgrade only adds 4.4% CDR.
Valued correctly, that's about 233 gold, not 800.
Flat AH valuation overstates the benefit <u>by more than 3x.</u>

Why CDR% is Better

- It directly represents gameplay impact - which is the real value players feel
- AH converts to CDR% on a curve, not linearly. CDR% reflects this naturally

- Fair gold comparisons - If we value items by "cost per 1% CDR", we can compare builds and upgrades without inflating numbers

So then, how much is CDR% worth?

Short answer - it depends on how much Ability Haste (AH) you already have.
CDR% comes from AH by: CDR% = AH / (100 + AH) * 100

Instead of asking "How much gold is this 1% CDR worth at this exact point?" (which is very marginal), you should ask:

"How much gold have I spent in total to reach this %CDR and what's the average cost per 1%?"

The formula for it would be

$$Value_{average}(1\%\ CDR\ up\ to\ AH\ =\ A) = \frac{100 + A}{2}\ gold$$

Example:

When A=50 AH, then 1% CDR% is worth (100 + 50)/2 = 75 gold.
When A=100 AH, then 1% CDR% is worth (100 + 100)/2 = 100 gold.
When A=200 AH, then 1% CDR% is worth (100 + 200)/2 = 150 gold.

This reinforces the idea that the initial "1 AH = 50 gold" is only accurate at very low levels of AH and becomes progressively less accurate as AH stacks.