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Civ1 explained: tribal huts visit outcomes

Discussion in '[Civ1 - General Discussions](#)' started by [darkpanda](#), Sep 25, 2013.

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Dark Prince

Joined: Oct 28, 2007

Messages: 600

Due to popular demand (actually only kirkham7 asked for it, I think) while trying to hack CIV randomness without altering CIV.EXE, I have gone through the "Tribal Hut" reward algorithm, and I lay it below for everyone to see:

- If the Civ searching the hut is Barbarians OR the Unit searching the hut is category 1 (air) -> **nothing happens**; *interestingly, this means that enemy Civs also benefit from tribal huts visits...*
- Compute the **distance to the nearest city** (any owner)
- **Random call: 0, 1, 2 or 3**
 - **If 0:**
 - If distance to nearest city is equal to or larger than 4:
 - If Map square land value is equal to or above 13 => **You have discovered an advanced tribe**
 - Else => **You have discovered valuable metal deposits worth 50\$**
 - Else => **You have discovered a friendly tribe of skilled mercenaries**
 - 50% chance of getting Legion or Cavalry
 - **If 1:**
 - If current turn is 0 (year 4000 BC) OR current year is later than 1000 AD => **You have discovered valuable metal deposits worth 50\$**
 - Else **You have discovered scrolls of ancient wisdom:**
 - Randomly select a Civ Advance ID among the 72 of them
 - If the player already has it OR doesn't have all prerequisites to that tech, increment to next Advance ID (modulo 72) and loop back to previous step (do this for a maximum of 1000 loops)
 - Else give the Advance to the Civ
 - **If 2:** => **You have discovered valuable metal deposits worth 50\$**
 - **If 3:**
 - If the distance to the nearest city is less than 4 OR if the Civ has no city yet => **You have discovered a friendly tribe of skilled mercenaries**
 - 50% chance of getting Legion or Cavalry
 - Else => **You have unleashed a horde of barbarians!**
 - **If 4:** => **You have discovered a friendly tribe of skilled mercenaries** (this can actually never happen since random values are only in the range {0 .. 3})

Obviously, some kind of random cheating is possible to control the huts outcomes, but as you can see, the result also depends on other game factors that are more difficult to control...

So to answer a few questions:

- **kirkham7:** Is it possible that huts always give a new city? -> No, since it also depends on proximity to another city, and land value of the hut square; kind of makes sense, you wouldn't to build a city on a mountain or hill, I guess, although the value threshold could have been lower than 13...
- **urbancaver:** Is it possible to always get an Advance? How many advance can you get? -> YES, and technically speaking, you could get ALL advances through huts, provided you visit enough huts before 1000 AD... I need to try this one out, seems too good to be true...

And as far as hacking CIV.EXE, there are plenty of possibilities: change the default units for Skilled Mercenaries, disable the possibility of barbarians, bypass the advance "pre-requisite" check so you could discover Space Flight in 3980 BC (some kind of StarGate or Atlantis mode 😊)

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[Urtica dioica](#)
Chieftain

Joined: May 8, 2008
Messages: 76

It's good to finally know the formula. I've wanted to know this for years now. I'd tried figuring it out by experiment, but this formula is too complex for that.

I've got to clarify something about the tech picking formula. If it picks a random number, then cycles through the list to find a discoverable tech, then some techs will be many times more likely than others. Also, since it picks a number up to 72, and there are only 68 techs, 4 numbers at the top must never match (and therefore always carry over). So, if I have Alphabet and Bronze Working, apparently I'm 31 times more likely to get Code of Laws than Currency.

What we really need is a screenshot of "ancient scrolls of Future Tech".

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[darkpanda](#)
Dark Prince

Joined: Oct 28, 2007
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Urtica dioica said: ↑

If it picks a random number, then cycles through the list to find a discoverable tech, then some techs will be many times more likely than others. So, if I have Alphabet and Bronze Working, apparently I'm 31 times more likely to get Code of Laws than Currency.

Well of course, this "iterating" logic makes some Advances more likely than others, I am not sure you can do anything about... Except for a CIV.EXE *hack* to make it truly random, e.g. re-select another random Advance.

Urtica dioica said: ↑

Also, since it picks a number up to 72, and there are only 68 techs, 4 numbers at the top must never match (and therefore always carry over).

Indeed, and the reason for this is that those 4 last techs refer Tech ID 127 as a pre-requisite, but there is no such Tech with ID 127, so you can never discover them. Even by changing this data, I suspect that CIV will crash by lack of appropriate related tech resources (data, PIC, etc.).

Urtica dioica said: ↑

What we really need is a screenshot of "ancient scrolls of Future Tech".

Won't be happening: Future Techs are not part of the "Civ Advance" data (Gowron mentioned those data lists in another thread, look for "Data Tables"), so they can never be selected by this process. Instead, what happens (I just tested it) is that you get the popup message "You have discovered scrolls of ancient wisdom", but then the popup ends without any Advance being discovered... Although twice before that I discovered Nuclear Fusion and Chivalry.

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[Kras](#)

That explains a lot! Thanks! When we were younger we would experiment with the game in various ways. Sometimes we didn't built any cities and we would just move around the map collecting the huts. Without a city every "barbarian pop" would mean new troops. We used those soldiers to eradicate players before they grew in power. It was possible to win before 2000 BC. Now I know the mechanics that stand behind this. Oh, and if you would kill last enemy unit just one turn before an auto-save then after loading it, you could play solo, without computer players.