

FAQ for the Agent Negotiation and Elicitation League of ANAC 2020

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- **In a given round, may the negotiating party ask for preference elicitation multiple times? Can we make several comparison queries in the same round or only single comparison query at a given round?**

A party can ask preference elicitation ANY TIME. It does not even have to have the turn. It can thus ask as much as it wants at any time.

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- **How can I get the elicitation cost?**
 - **Can parties access the elicitation cost? By calling which method?**

There is a parameter "elicitationcost" for the SHAOP party. Parameters are passed inside the SessionSettings which is called when the party gets started. So SHAOP party can check the parameter.

In your party, when you receive an Inform instance of Settings:
`settings.getParemeters().get("elicitationcost")`

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- **How can I set the elicitation cost?**

You can set the values for elicitation const under parameters section

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- **How can I access the reservation bid?**

You can access reservation via *Profile*.getReservationBid()

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- **Where can I find details about a profile/profiles?**

You can access available information about a profile from Profiles Server. [\[wiki\]](#)

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- **Is there anyway to directly have access to "utilityspace" for DEBUG and TESTING purposes only?**

The cheat for fetching profile information through it's URL should be only for testing and debugging purposes.

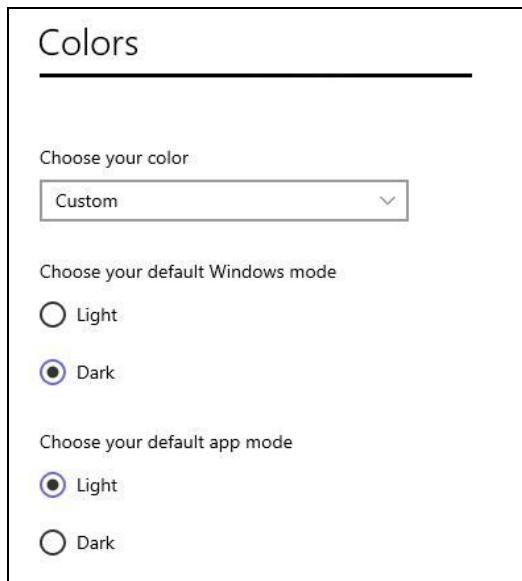
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- **How I can't run profiles with filters directly/on stand-alone mode?**

You cannot use filters, URL parameters, with File URIs unless your system supports it.

If you want to filter and use a specific profile, it is recommended that you create a separate file containing the filtered profile.

- **GeniusWeb App won't open up on Windows, what should I do?**

This can happen if you have "dark theme" enabled. Please switch your theme configuration for Colors like so:



- **What are the input fields on Run Session for?**

Mentioned fields are highlighted in the screenshot below following table

Accepted Filters:

Filter Option	Query Value	Explanation
partial	Integer $N \geq 0$	a query key that is assigned a natural number N (0 or larger). If set, the profile is converted into a Partial Profile with the given number of points. If $N > 0$, the maximum utility bid is included. If $N > 1$, the minimum utility bid is included. The other bids are picked at random. This filtering mechanism only works if the profile is {@link LinearAdditive} space. Warning: Use values ≤ 20. With higher values, the computation takes too long and your party may time out on fetching the profile.

Accepted Parameters:

Set of values that are given to agents, accepts input in JSON format.

Parameters

```
{ "param1": 0.2, "param2": "ab" }
```

Parameter values are specific to agents, please check their docs for their parameters

Genius File Edit View Window Help

Genius Run Server Profiles Server Parties Server

New Session

Server

http(s):// geniusweb.ewi.tudelft.nl:8080/profileserver-1.3.1/

Protocol: SHAOP (Stacked Human Alternating C) Domain: ws://131.180.178.127:8080/profileserver-1.3.1/websocket/get/laptop

Deadline: 10 rounds

Participants

Server: http(s):// geniusweb.ewi.tudelft.nl:8080/partiesserver-1.3.1/

Edit Next Party

Party: http://131.180.178.127:8080/partiesserver-1.3.1/run/simpleshaop-1.3.1

Profile: ws://131.180.178.127:8080/profileserver-1.3.1/websocket/get/laptop/laptopS

Filter:

Parameters: { }

Advanced Options

Add Participant 0

Start Session

- **My agent won't compile / there are errors messages in the code / can't find project libraries**
Try deleting ".m2" folder located under the home folder of your user.
For windows: "%userprofile%\.m2"
For linux/osx: "~/.m2"
(these locations can differ depending on your configuration)
- **There is a RED dot next to server URL**
Please check your server configuration and make sure that they are running
- **My installation is correct but can't run SHAOP party**
SHAOP party requires additional parameters to be set, you might be missing out on those.

Participants

Server

http(s):// localhost:8080/partiesserver  

Edit Next Party

Party http://192.168.1.39:8080/partiesserver/run/simpleshaop-1.3.1 ⇅

Profile ws://192.168.1.39:8080/profileserver/websocket/get/laptop/laptopSeller ⇅ **Filter** partial=10

Parameters

{ }

Advanced Options

Add Participant 1

- **How can I access/debug the source code of Genius Web?**

Public source code releases of Genius Web are available for download at [GeniusWeb website](#).

- **How can I upgrade to the new version of Genius Web?**

Download the latest version of Genius Web App from [Releases](#)

Download the latest version of Server “.war” files from the following links:

- [Genius Web Parties Server](#)
- [Genius Web Profiles Server](#)
- [Genius Web Run Server](#)

You can directly replace “.war” files with the previous ones.

To upgrade Genius Web App, double click on the installer you just downloaded. It will automatically replace the previous version.

You also need to update your Agent's pom.xml file

Current update requires you to update dependencies to 1.4.2

Latest version requires that your agent version is at least 1.4.2

Your agent's jar file **should** include this version indicator in its name.

There should be no ground breaking changes present for your agents, just updating version should suffice at the moment.

If you are unable to see your agent after this version update, it can be due to version mismatch.

You can see the diff for a sample agent below, for upgrading dependencies from 1.3.1 to 1.4.0.

```

<groupId>geniusweb.sampleagent</groupId>
<!-- TODO Update below if you change your project n
<artifactId>MyAgent</artifactId>
- <version>1.3.1</version>
+ <version>1.4.0</version>
<packaging>jar</packaging>
<properties>
  <project.build.sourceEncoding>UTF-8</project.bu
@@ -30,17 +30,17 @@
  <dependency>
    <groupId>geniusweb</groupId>
    <artifactId>party</artifactId>
-    <version>1.3.1</version>
+    <version>1.4.0</version>
  </dependency>
  <dependency>
    <groupId>geniusweb</groupId>
    <artifactId>bidspace</artifactId>
-    <version>1.3.1</version>
+    <version>1.4.0</version>
  </dependency>
  <dependency>
    <groupId>geniusweb</groupId>
    <artifactId>profileconnection</artifactId>
-    <version>1.3.1</version>
+    <version>1.4.0</version>
  </dependency>

```

- How can I get the current deadline?

In your agent, there is a method called “notifyChange”.

In this method, you are able to get the information about the current status of the session.

```

52      @Override
53      public void notifyChange(Inform info) {
54          try {
55              if (info instanceof Settings) {
56                  Settings settings = (Settings) info;
57                  this.profileint = ProfileConnectionFactory.create(settings.getProfile().getURI(), getReporter());
58                  this.me = settings.getID();
59                  this.progress = settings.getProgress();
60              } else if (info instanceof ActionDone) {

```

When the information received “info” is an instance of “Settings” class, it presents you the current session settings. From there you should be able to retrieve current progress by

```
settings.getProgress().get(System.currentTimeMillis());
```

For the when using rounds, you can use the following functions similarly:

```
((ProgressRounds) settings.getProgress()).getCurrentRound();
((ProgressRounds) settings.getProgress()).getTotalRounds();
```

Please note that, these values should be validated to be of given instances as well, depending on your case, and can be accessed through the shown settings variable if value of “info” is an instance of “Setting” class.

The competition challenge is to develop a negotiation party that can negotiate and perform elicitation under preference uncertainty. How do I use the API to get back the ordered list of bids?

Instead of a utility function, parties receive (not produce) a PartialOrdering of bids as input. For this competition, the received Partial Ordering is guaranteed to contain the best and worst bid in the space. The party will have to negotiate the best deal with that information.

To get you started, GeniusWeb comes with the simpleSHAOP party (<https://tracinsy.ewi.tudelft.nl/pubtrac/GeniusWeb/browser/exampleparties/simpleshaop>) . Note that this party internally uses its own SimpleLinearOrdering which contains the estimated user profile.

How does the partial profile work, exactly?

The idea of a PartialOrdering is that the profile can compare two bids using the isPreferredOrEqual(bid1, bid2) function. This function returns true iff bid1 is considered better or equal ($\geq$) than bid 2. For this assignment you can assume that two bids can always be compared (you always will get true either for $\text{bid1} \geq \text{bid2}$ or for $\text{bid2} \geq \text{bid1}$). If $\text{bid1} \geq \text{bid2}$ AND $\text{bid2} \geq \text{bid1}$ then the bids have the same value. For the exact details of how this works in GeniusWeb, please refer to the GeniusWeb page (<https://ii.tudelft.nl/GeniusWeb/>) the wiki pages and the javadocs.

The SimpleSHAOP party uses this additional information to create a list of example Bids, ordered by utility. The utility is estimated from the place of the bid in the list. This is done in the SimpleLinearOrdering that comes with the simpleshaop example.

Can I call external libraries from my agent?

You are allowed to include any external libraries with your party (eg, by adding dependencies to your maven pom), as long as your submitted files are self-contained and can be added to Genius in the standard way. This is insured by maven if you use the maven-assembly-plugin as in the example. If your agent requires special instructions please specify them and we will do our best to accommodate them.

What type of domains shall be used?

All domains will be discrete, so we use only DiscreteValueSet, not NumberValueSet. The size of domains used in the competition will be small enough to enumerate.

Where can we find examples of good agents (like ANAC winners)?

Some of the ANAC agents have published papers for which you can refer to Google (Scholar). There's also a paper (source [\[47\]](#) in the assignment) which contains a whole paragraph of agents with sources. See: https://link.springer.com/chapter/10.1007%2F978-4-431-54758-7_4 You can also find the sources of agents included in the Genius framework:

<https://tracinsy.ewi.tudelft.nl/pubtrac/Genius/browser/src/main/java/agents?rev=21&order=author&desc=True> The agents from ANAC 2017 and 2018 are made for a multilateral setting and do not work very well for the bilateral setting of ANAC 2019.

Notice that these old ANAC agents were designed for Genius and will not compile and run on GeniusWeb. But the principles used by these agents should be translatable pretty straightforward to GeniusWeb.

Is there a tutorial for Genius available?

Please check here <https://ii.tudelft.nl/GeniusWeb/>

How do I generate a random bid?

See randomparty, you can use something like this:

```
AllBidsList bidspace = new AllBidsList(profileint.getProfile().getDomain());  
long i = random.nextInt(bidspace.size().intValue());  
bid = bidspace.get(BigInteger.valueOf(i));
```

How do I generate a random bid with a utility threshold?

There does not (yet?) exist an efficient way to do this with a partial space, but since these spaces will be small in this competition you probably can get away with a brute force iteration over the SimpleLinearOrdering.

How do I change the content of a bid?

You can't as Bids are immutable. Just create a new bid with the correct values.

Questions to be answered:

I couldn't find links to agents of 2018 and 2019 (the links above).

Is it possible to get some examples of good agents from those years?