Linguistics Challenge: JSGF development

Background

As part of the interview process, we would like you to complete a small linguistics challenge.
The following is a Context Free Grammar, written using the Java Speech Grammar Format (http://www.w3.org/TR/jsgf/):

```
#JSGF V1.0 utf-8 en;
grammar music_play;

public <music_play> =
   [can you] (put on | play) (<artist> | <song>);

<artist> =
    beatles |
    radio head |
    cake |
    pink floyd;

<song>   =
    confortably numb |
    paranoid android |
    let it be |
    hey jude;
```

The above grammar is meant to be used to create artificial data for music play intents to augment coverage and leverage statistical model training. As a reference, the above grammar is able to generate utterances like the following, using a custom parser:

```
[can you play]<unk> [beatles]<artist>
[can you put on]<unk> [paranoid android]<song>
```

To better understand the parsing process, keep in mind that:

- rules containing only terminal symbols are used as tags for those symbols
- everything else is tagged as unknown (<unk>) by the parser.

Your tasks

Task 1: extend the english grammar

- Extend the above grammar to cover the following kind of utterances:
  ```
  [i want to listen to]<unk> [jazz]<genre> [music]<unk>
  [play me]<unk> [ummagumma]<album> [by]<unk> [pink floyd]<artist>
  ```
- Don’t worry about overgenerating while introducing the above productions.
- Do you see any limitations on how the above grammar could scale up, as you keep adding entities to provide coverage for building the final statistical models?
  Shortly report them if any, and share some ideas to possibly overcome them.

Task 2: localize the JSGF grammar in your language

- Once you’ve completed task 1, please localize the final JSGF (with all the additions) in your native language.
- Feel free to add everything you think could be most helpful to improve the quality of generated utterances in your language.
- Provide us with some sample utterances the JSGF is able to produce along with the localized grammar.