



Inference Tuner

Automatically Build Speech Application Grammars

The Inference Tuner is a sophisticated development tool that helps automate the building speech application grammars. Tuner uses the core components of Inference's Grammatical Inference engine to allow speech developers to develop grammars regardless of which tool they use to produce the dialogue flow. Tuner provides developers with a stand-alone grammar generation tool which can be integrated with other speech recognition IDE products if required.

Tuner incorporates sophisticated artificial intelligence that allows developers to build complex speech grammars (such as mixed initiative grammars) without the need for manual coding. Developers can rapidly build grammars using Tuner's learning-from-examples technique.

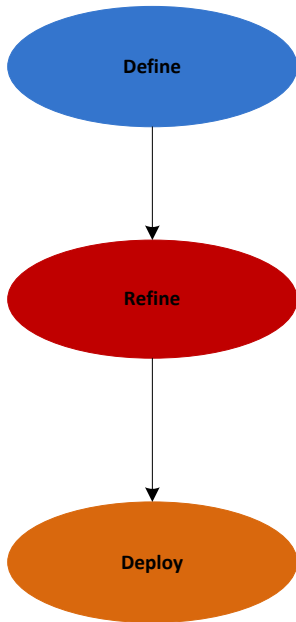
Why Inference Tuner is Next Generation Technology

Currently, grammars are constructed by linguists and language specialists. As a result, grammar development is both expensive and time consuming. Tuner offers developers a unique value proposition that significantly lowers the cost of grammar development and maintenance;

- Tuner is the only solution that can automatically create application grammars by applying sophisticated artificial intelligence techniques.
- Tuner has a unique, simple and intuitive user interface where the developer only needs to provide examples of spoken phrases. The learning-by-examples AI technology in Tuner generalizes the examples to fully comprehensive grammars.
- Tuner hides the complexities of grammar creation and generalisation from the developer. In fact, the user need not even see the grammar files!
- This allows speech application grammars to be developed **CHEAPER, FASTER, & MORE FLEXIBLY.**



Inference Tuner - 3 Step Process



STEP 1: The user defines the grammars required (for example, a hotword phrase such as “buy now”; or an input field such as “stock name”) for the project, using Tuner’s XML Project Editor.

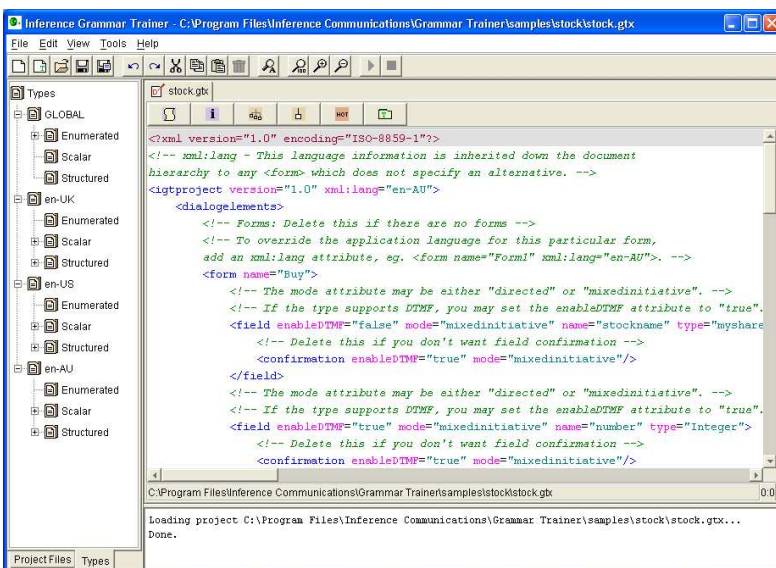
STEP 2: Tuner then automatically creates the grammars. In this step, the user can create starting mixed initiative grammars by entering example phrases. The user can also interactively or via a batch mode, improve the grammars by providing training examples, using the Train Grammar feature.

STEP 3: Tuner generates deployment grammars in a number of grammar formats, including but not limited to Nuance GSL, Scansoft SRGS, and JSGF, using the IVR Code Generator feature. The user can then copy the generated deployment grammars to a location accessible by the VoiceXML code via a VoiceXML browser.

Inference Tuner makes it easy and intuitive to create sophisticated speech grammars, all from a single interface, with the following 3 Step Process outlined above.

Inference Tuner Interface

Inference Tuner takes a simple XML representation of your grammar and converts it into a fully functional and maintainable natural language grammar for your speech platform.



No Need for Speech Specialists

This is a new approach to grammar generation specifically designed to allow rapid grammar development without the need for specialist skills. Some of the features offered by Tuner include:

- The use of low level grammars from libraries (“starting grammars”).
- The use a “learning from examples” process to produce grammars for full mixed initiative applications.
- Tuner learns grammar across multiple dialog states.
- Tuner learns concepts as well as syntax.
- Tuner generalizes business process driven applications into natural language ones.
- Tuner recognises interchangeable phrases.
- Tuner supports optional phrases and removal of bad phrases (nonsense phrases, wrong meanings).

Tuner v2.0 Features

Grammar Specification Editor

- XML Editor with templates
- Validator

Build Grammar Tool

- Builds starting grammars
- Combinator sub-tool: mixed initiative

Train Grammar Tool

- Interactive vs batch mode
- Importing transcripts

IVR Code Generator

- Grammars generated in multiple formats
- SLM grammar generation (Nuance format)



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