Automated Jazz Improvisation

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Abstract. I will demonstrate the jazz improvisational capabilities of Impro-Visor, a software tool originally intended to help jazz musicians work out solos prior to improvisation. As the name suggests, this tool provides various forms of advice regarding solo construction over chord changes. However, recent additions enable the tool to improvise entire choruses on its own in real-time. To reduce the overhead of creating grammars, and also to produce solos in specific styles, the tool now has a feature that enables it to learn a grammar for improvisation in a style from transcribed performances of solos by others. Samples may be found in reference [4].

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References

- Keller, R. and Morrison, D.: A Grammatical Approach to Automatic Improvisation, In: Proceedings Fourth Sound and Music Computing Conference, Lefkada, Greece, July (2007)
- 2. Gillick, J., Tang, K., and Keller, R.: Learning Jazz Grammars, In: Proceedings Sixth Sound and Music Computing Conference, Porto, Portugal, pp. 125--130 (2009)
- 3. Keller, R. et al.: Jazz Improvisation Advisor, http://www.impro-visor.com (2009)
- 4. http://www.cs.hmc.edu/~keller/jazz/improvisor/Solos/index.html