(LL) Scattered Context Grammars

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Scattered context grammars (SCG) are generalization of context-free grammars (CFG). The only difference between them is definition of rules P in SCG, where each rule can have more nonterminals on the left side and then has to have equivalent number of strings from alphabet V on the right side, where each rule is applied in the same linear order.

LL Scatterd context grammars are modification of SCG, where every x_i on the right side of the rule can contain at most one nonterminal, every rule has to be applied in a *leftmost way*, and the resulting grammar from the first components of all rules has to be *LL grammar* [1].

In this presentation we will describe LL Scattered Context Grammars – we will formally define SCG, describe difference between them and context-free grammars and show a simple example of language generated by this grammar. In the next part, we will describe LL SCG in comparison with SCG and show examples of languages that can be generated with this grammar and languages that cannot be generated.

References

[1] MEDUNA, A. a ZEMEK, P. *Regulated grammars and automata*. New York: Springer, 2014. 119-153 s. ISBN 9781493903689.