

# **FeatureList xText EBNF Version 2.0**

- **Core Features:**

1. BNF front-end (Parser, Lexer, Linker, etc.)
2. translates a textual representation into an Ecore model
3. Editor - provides IDE features, e.g. auto-completion, syntax highlighting, etc.

- **Validation Rules:** these rules will give warnings in the editor if they find inconsistencies in the code

1. checkUpdateGrammarConsistency: checks, if the grammar is an updated grammar, for consistencies between the originals and the new grammar e.g.: status: not migrated
2. CheckReferencedOnlyOnce? : this should warn if there is a rule that is only referenced once, this is an inlining hint e.g.: status: migrated
3. checkPassthroughRule: e.g.:this tests if a rule gets just passed through  $a ::= b \quad b ::= \text{"literal"} \Leftrightarrow a ::= \text{"literal"}$  , which is better for EBNF
4. checkEqualAlternative: this tests if a rule got equal alternatives e.g.:  $a ::= d \mid d$  status: still some problems
5. checkDuplicateRules: checks if there is another rule in the EtsiBnf? , that got the same behaviour e.g.:  $a ::= \text{"literal"} \mid b \quad c ::= \text{"literal"} \mid b$  status: migrated
6. checkSubruleDuplicates:  
status: not migrated
7. check unused rule: it checks if a rule is used (except for the rule with the number 1)  
status: migrated
8. checkNameIsUnique: checks if the name of a rule is already in use e.g.:  $a ::= \text{"end"} \quad a ::= \text{"fin"}$   
status: migrated

- **Generation:**

-basic generation has been achieved but the output-format is unclear. Works with a Xtend-generator, momentary "xmi-like" output for a bnf grammar -old version had: mwe2 Generator and Xpand2 support

- it could generate mergeGrammars from CoreGrammars? and CompositeGrammars? from Merge grammars -seemingly it could produce a xsl-fo-file with the corresponding nodemodel

-new version: xsl-fo file for all bnf grammars (not for merge or deltagrammars)  
this can be Rendered to Pdf using apache-fop

- **Formatting:**

old: had some but they are got commented out in the main project

new: Line-break after every rule, white-spaces after all literals, possible update  
linebreak and double tab after all >|< bars

- **Refactoring & Quickfixing:**

1. auto Numbering of rules -not migrated
2. remove unused rules -not migrated
3. replacement of passthroughRules -not migrated
4. refactor uppercasetokenRules -not migrated

5.find references, this one is standard in xtext2.\* -renaming, this is standard in  
xtext2.\*

\*Grammar composition:

-3 grammartypes:

grammar: normal grammar deltagrammar: different notation for a  
extension grammar,

adds new rules to a grammar (regular rules)and  
adds changes to rules of the extended  
grammar(extension rules) -can be automaticly  
created

mergegrammar: for merging extensions

-old version had an automatic composition Process, for merge grammars, with a  
small pop-up-menu.

- at the moment no support in the new version

- **Deploying:**

-export project: Plug-in Development/deployable plug-ins and fragments -rcp project with a  
minimal eclipse editor