

# **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 consistencies 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 nam 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* -migrated

1. *replacement of passthroughRules* -not migrated

1. *refactor uppercasetokenRules* -not migrated

1. *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