

# 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

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  $a ::= b \mid b ::= \text{"literal"} \Leftrightarrow a ::= \text{"literal"}$  , which is better for EBNF

status: migrated

4. *checkEqualAlternative*: this tests if a rule got equal alternatives e.g.:  $a ::= d \mid d$  status: still some problems

status: migrated

5. *checkDuplicateRules*: checks if there is another rule in the Ebnf, that got the same behaviour e.g.:  $a ::= \text{"literal"} \mid b \mid c ::= \text{"literal"} \mid b$

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.:  $a ::= \text{"end"} \mid a ::= \text{"fin"}$

status: migrated

## Generation:

Generating an intermediate xsl-fo representation for all BNF grammars (merge or delta grammars not supported). This can be rendered to PDF using apache-fop

status: in progress

## 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 and Quick-fixing:

Automated restructuring support.

1. *auto Numbering of rules*
  - not migrated
2. *remove unused rules*
  - migrated
3. *replacement of passthroughRules*
  - not migrated
4. *refactor uppercasetokenRules*
  - not migrated
5. *find references* - provided by xtext2
6. *renaming* - provided by xtext2

## Grammar Composition:

- 3 grammartypes:
  - ◆ grammar: normal grammar
  - ◆ delta grammar: 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 automatically created)
  - ◆ merge grammar: 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

## Deployment:

- export project as Plugin: Plug-in Development/deployable plug-ins and fragments
- RCP project with a minimal eclipse editor: TBD