Parameter/Constraints Validation
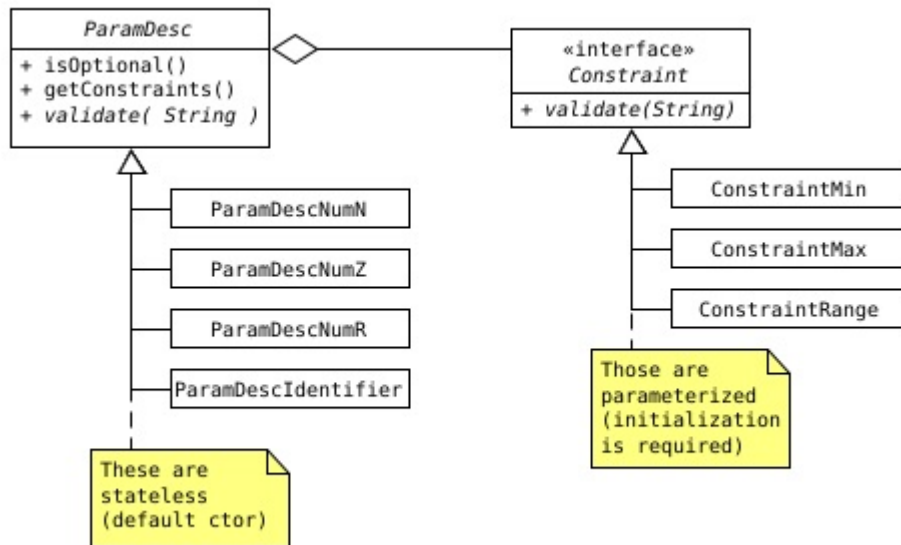
Old Design

ParamDesc
+ isOptional()
+ getConstraints()
+ validate(String)

ParamDescNumN
ParamDescNumZ
ParamDescNumR
ParamDescIdentifier

«interface»
Constraint
+ validate(String)

ConstraintMin
ConstraintMax
ConstraintRange

These are
stateless
(default ctor)

Those are
parameterized
(initialization
is required)

New Design

ParameterValidatorFactory
+ Create(): ParameterValidatorFactory

+ NaturalNumber(): ParameterValidator
+ WholeNumber(): ParameterValidator
+ RealNumber(): ParameterValidator
+ Identifier(): ParameterValidator
+ Path(): ParameterValidator

produces

One object for
each "type"
1   N

Because the parameter
validators are stateless,
one object made public
will suffice.

«interface»
ParameterValidator
+ validate(String):bool

ParameterValidatorRegex
+ Validator(Regex)

Constraint
Min(T): ConstraintValidator
Max(T): ConstraintValidator
Range(T, T): ConstraintValidator

«interface»
ConstraintValidator
+ validate(String):bool

Min
Min(value: T)

Max
Max(value: T)

InRange
InRange(lo: T, hi: T)

Not
Not(value: T)