





	Motivation	Metamodel	Prototype	Experimentation	on Conclusions			
Goal-question-metric (GQM)								
♦ Q	uality is a	ssessed	in a top-	down way	,			
• G	GQM proposes three abstraction levels:							
-	 Conceptua Express E.g. red 	al level: GO high-level q <i>luce the num</i>	ALS uality goals ber of return	ed mails	Business-oriented Difficult to reuse			
-	 Operational level: QUESTIONS Characterize the way to assess a specific goal E.g. which is the amount of syntactic errors in customer addresses? 							
 Quantitative level: METRICS Constitute a quantitative way of answering a specific question E.g. <i>the ratio of addresses not complying a street dictionary</i> 								
000'200	20/1/2008		Vorónika Bor	ralta	Quite parametric Possible to reuse			







Mot	tivation	Metamodel	Prototype	Experimentation	Conclusions			
Exam	ples	of ins	tan	tiation				
Ques	stion:			S Address s	yntactic cor yntactic cor	rectness rectness		
– Are the students' addresses correctly written?								
	Ν	letrics		Method	S			
S	yntactic col ddress form	rrectness Boo nat completio	olean (n -	CheckRule student's address address standard	attributes format			
S	yntactic col ddress syn	rectness Boo tax existence	olean (CheckDictionary student's street at	tribute			
Si de A	yntactic col eviation <i>ddress syn</i>	rectness tax deviation	-	ComputeDistance student's street at street dictionary string-edit-distance	tribute e			
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Motivation	Metamodel	Prototype	Experimentation	Conclusions				
Using Q	Business expert							
Defining quali	H							
Step 1: Goals and questions	Manage data g	quality goals and que	estions					
Goals and questions Goal1:Improve th Goal1:Improve th Goal2: Are Question3: Are Question4: Do Goal2: Reduce co	Goals and questions Goals:Improve the quality of clients location data (i.e. phone, address, etc.) Question1: Are the client's addresses up to date? Question2: Are the client's addresses correctly written? Question3: Are the client's phones valid? Question4: Do we have the number and street number in every address? Goal2: Reduce costs caused by former clients mail							
Insert new goal Goal New i	tem ew item							
Delete item								
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Motivation	Metamodel Pr	ototype	Experimenta	ation (Conclusions			
Using Q	box-Fou	ndati	on		Qualit analys	y at	-	
Editing and executing instantiated methods								
Quality measurement Execu	te and edit measurements							
Goal	Question	Factor	Metric	Method	IS Object	Edit	Exec	
Goal 1:Improve the quality of clients location data (i.e. phone, address, etc.)	Question2: Are the dient's addresses correctly written?	Syntactic correctness factor	Syntactic correctness boolean metric	Check street name in street dictionary, if present correct.	Clients.address	2	►	
Goal 1:Improve the quality of clients location data (i.e. phone, address, etc.)	Question2: Are the client's addresses correctly written?	Syntactic correctness factor	Syntactic correctness deviation metric	Check street name in street dictionary, measure syntactic distance	Clients.address	2	Þ	
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Motivation Metamodel Protot	ype Experimentation	Conclusions
nples of insta	ntiation	
estion:	Syı Address syı	ntactic con ntactic con
re the students' addresse	es correctly written?	
Metrics	Methods	
Syntactic correctness Boolean Address format completion	CheckRule - student's address at - address standard fo	ttributes rmat
Syntactic correctness Boolean Address syntax existence	CheckDictionary - student's street attri - street dictionary	bute
Syntactic correctness	ComputeDistance	bute

	Motivation	Metamodel	Prototype	Experimentation	Conclusions				
ļ	Examples of instantiation								
	 Goal 1: Improve the quality of students location data (phone number, address, etc.) 								
	Questions IS objects Quality factors								
1	Are students' addr	esses the corr	ect ones?	Student's address	Semantic correct.				
2	Are the students' a written?	ddresses corr	ectly	Student's address	Syntactic correct.				
3	Are the students' t	elephones vali	d ones?	Student's phone	Syntactic correct.				
4	Do we have precis	e students' ad	dresses?	Student's address	Precision				
5	Are students' addr	esses up to da	ate?	Student's address	Currency				
6	Do we have all stu	dents' address	ses?	Student's address	Coverage				
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Motivations	Evaluation Problem	Proposed Framework	Conclusions
Multitude o	of quality	y factors	
Intrinsic	Accuracy – Objectivity – Credibility – Reputation –	Precision, Cc Objectivity, N Impartiality Credibility, C Reputation System avail	prrection, level of detail. Ion ambiguity, Factuality, onfidence ability, source availability,
Accessibility	→ Access → Security —	Transaction a Localization, Security, Priv Pertinence, F	availability, Ease of use, Assistance /ileges Relevance, Utility
Contextual	 Pertinence Added value Freshness Completenes Data quantity 	 Importance, , Currency, Ag Density, Cov Volume, Data Interpretation Reasonable, Presentation 	Added value, Contents e, Volatility erage, Suffisance a quantity n, Modifiability, Traceability, Appearance,
Representational	 Interpretation Comprehens Concise representation Consistent representation 	Comprehens Clearness, S Comparability Minimality, U representatio epr. Consistency, Semantics, C	ion, Readability, ignification, Provider, y niqueness, Concise n Format, Syntax, Alias, ontrol of versions
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