

Summary/Action Plan of Utah Core-1/Core-2 Meeting March 24 to 26, 2008

Categories	Subcategories	Task	Responsible*		Timeline**	
			Core-1	Core2	When	What
DWI Analysis	DICOM to nrrd	Test existing converter with various DTI input, generate list of scanners/DTI sequences that were successfully tested	SG	Xd	AR	List of successfully tested DTI DICOM data converted to nrrd
	Preprocessing / correction of artifacts	DWI motion correction and Eddy current correction	TF, SB	Xd	AR	
	Automatic Population-based DTI analysis		CG, PG, SA	JM, AL	AR	modules in repository
					PW	pipeline prototype, Insight Journal w. modules in ITK
					AHM09	Slicer3 plugin of full pipeline, including basic statistical analysis
Categories	Subcategories	Task	Responsible*		Timeline**	
Segmentation	Brain stripping & bias correction		MP, GG	JM	AR	modules in repository pipeline prototype, tests for chaining framework
	Brain white matter mask					
	Full brain tissue classification					
	Automatic brain tissue and lesion analysis		MP, GG	JM	PW+ / AJM09	Integrated package including lesion analysis, Slicer3 plugin of full pipeline
Categories	Subcategories	Task	Responsible*		Timeline**	
Shape Analysis	Pipeline for statistical group analysis of populations of shapes	make all modules itk-ready, define optimal pipeline, visualization and QC of intermediate steps	JC, MS, RW	JM	AR	modules in repository
					PW	work towards packaging/chaining modules into pipelines, development towards statistics modules ©

Categories	Subcategories	Task	Responsible*		Timeline**	
Quality Control Tools (QC)	DTI QC of raw data	Develop method for QC of DWI data (slice and gradient orientation artifacts), generate description of artifacts as output, template is existing DTIchecker tool	SG, CG, GG	SP, JM	PW	Design and prototype of DTI QC tool
	QC of set of volumetric images defined in the same coordinate frame, check of segmentation output and of registrations, e.g	Use MRIWatcher tool as example				
	QC of intermediate steps of shape analysis pipeline	ev. Display of all sets of shapes	JC, MS		tba	
Chaining of modules, batchmake, grid computing	Computational infrastructure for pipelines and for group analysis	framework for chaining modules into scripts/pipelines		MR, JM	AR	chaining of NAMIC modules (scripts)
		Framework for batch processing on large amount of data		MR, JM	AR	batch: apply chains to large amount of data
		Grid computing		MR, JM	PW	extend batch to grid
		Integration of cascading of transformations into chaining of modules		MR, JM	PW, AHM09	
Categories	Subcategories	Task	Responsible*		Timeline**	
NAMIC module repository	repository dedicated to NAMIC modules ready to be used in pipelines, w. well defined documentation, name-space for modules	Setup of space for repository, either centralized or as cvs distributed at sites, Guidelines for documentation and use Procedures for optimal name-space conventions		SP, ZA, SE	PW	repository ready to be used, tests by Utah segmentation (MP) and DTI (CG) pipelines
Categories	Subcategories	Task	Responsible*		Timeline**	
Transform IO	define cascading/concatenation of transformations (linear, nonlinear etc), extend to EPI correction	Programming	TF	JM	AR	framework for cascading/concatenation transformations ready
Categories	Subcategories	Task	Responsible*		Timeline**	
Registration	efficient implementation of volumetric b-spline registration	tests with existing code from Ross Whitaker, extension to use various image match terms as plugins	RW	SP, JM	PW	

Categories	Subcategories	Task	Responsible*		Timeline**	
Utah Dashboard	Setup of HW/SW for ITK dashboard and regression testing	Purchase of HW, software installation	NR	WS	PW	Utah Dashboard ready to go

*Name conversion	
AL	Alex
CG	Casey Goodlett
GG	Guido Gerig
JC	Josh Cates
JM	Jim Miller
MP	Marcel Prastawa
MR	Marco Ruiz
MS	Martin Styner
PG	Polina Golland
RW	Ross Whitaker
SA	Sardar
SB	Sylvain Bouix
SE	Sebastian B.
SG	Sylvain Gouttard
WS	Will Schroeder
Xd	Xioadong Tao
ZA	Zack
NR	Nick Rathke, SysMan Utah

**Timeline	
AR	Annual report, end of April 2008
PW	Programmers week, end of June 2008
AHM09	AHM January 2009

Guido Gerig, March 27, 2008