

# Final Version-Nov 2012

Managing Waveform Data and Metadata for Seismic Networks  
 14-18 January 2013  
 Kuwait City, Kuwait

L=LECTURE  
 C=COMPUTER LAB

13-Jan-2013	Sunday	DURATION	Hotel		Le Royal hotel
	19:00	3:00	Attendees arrive <b>Registration and Reception</b> software installation (virtual box, OBSPY, etc)	L	Le Royal hotel
<b>14-Jan-2013</b>	<b>Monday</b>	<b>1:00</b>	<b>Welcome</b>		<b>Kuwait Institute for Scientific Research (KISR)</b>
	8:00	1:00	<b>Bus Transfer to KISR</b>		meet in hotel lobby
	9:00	0:30	Welcome and Introductory Remarks Kuwait Institute for Scientific Resaerch	L	KISR Managing Director
	9:30	0:20	An Overview of IRIS	L	KISR Managing Director
	9:50	0:20	Seismicity in Kuwait	L	Dr. Tim Ahern
	10:10	0:20	Logistics	L	Dr. Abdullah Al-Enezi
	10:30	0:15	Introduction of Lecturers	L	KISR TBD
	10:45	0:30	<b>Break</b>		
	11:15	1:30	<b>Tour of KISR</b> <b>Group Photograph</b>		
	12:45	1:15	<b>Lunch</b>		
	14:00	0:15	<b>Data Exchange within the FDSN</b> International Federation of Broadband Seismograph Networks	L	Tim Ahern
	14:15	0:15	ORFEUS	L	Mr. Reinoud Sleeman
	14:30	0:15	IRIS Data Services	L	Tim Ahern
	14:45	0:15	<b>Review of Workshop Agenda</b>	L	Tim Ahern
	15:00	0:30	<b>Break</b>		
	15:30	1:00	<b>Installation of Seismic Stations</b>	L	Dr. Peter Davis
	16:30	1:30	<b>Modern Seismometry and Digital Filtering Theory</b>	L	Prof. Erhard Wielandt
	18:00		<b>Bus back to Hotel</b>		
	19:30	0:30	<b>Board Buses to KISR Hosted Dinner</b>		Kuwait Towers
	20:00	2:30	<b>Welcome Reception</b>		Hosted by KISR (@ Kuwait Tower)

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15-Jan-2013	Tuesday	DURATION		Le Royal hotel
	8:00	1:30	<b>Modern Seismometry and Digital Filtering Theory</b> Mathematical Basis of the Transfer Function Poles and Zeroes	L Prof. Erhard Wielandt
	9:30	0:30	<b>Understanding SEED Headers</b>	Erhard Wielandt
	10:00	0:30	<b>Break</b>	
	10:30	1:00	<b>Digital Filtering Lab - Another look at Poles and Xeroes</b>	C Prof. Joachim Wassermann
	11:30	1:00	<b>PYTHON</b>	C Joachim Wassermann
	12:30	1:15	<b>Lunch</b>	
	13:45	1:00	<b>Application OBSPy Seismometer Deconvolution/simulation/filtering</b> IRIS/FDSN Web Services	C Joachim Wassermann
	14:45	0:45	<b>Modern Data Acquisition Systems</b> implementation in acquisition systems FIR Filters and downsampling	L Reinoud Sleeman
	15:30	0:30	<b>Structure of SEED</b>	L Reinoud Sleeman
	16:00	0:30	<b>Break</b>	
	16:30	0:30	<b>SEED Metadata and RESP Files</b>	L Mr. Rick Benson
	17:00	0:45	<b>Network Reports</b> FDSN GSN, PASSCAL, USArray	L Tim Ahern Tim Ahern
	17:45	0:30	<b>PDCC</b> Installation	Rick Benson & Tim Ahern
	18:15	0:45	<b>Network Reports</b> 3 Network Reports from Participants (3/3)	L various
	19:00		<b>Adjourn</b>	
	20:30	2:00	<b>OPTIONAL</b> Calibration of Seismic Instrumentation	Erhard Wielandt

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16-Jan-2013	Wednesday	DURATION		Le Royal hotel
8:00	0:45	<b>Portable Data Collection Center (PDCC) - Introduction</b> Overview of PDCC (0:15) Nominal Response Library (0:30)	L	Tim Ahern Dr. Mary Templeton Rick Benson
8:45	0:45	<b>PDCC</b> Single Station - SEED Perspective Producing SEED metadata for Participant Networks for a single station For similar stations with similar Seismic Channels		
9:30	1:00	<b>Building Network Metadata</b> from single station template excel files		
10:30	0:20	<b>Break</b>		
10:50	1:30	<b>PDCC</b> Participants practice building their own SEED 3 Network Reports from Participants (3/6)	L	various
12:20	1:00	<b>Lunch</b>		
13:20	0:30	<b>IRIS/FDSN Web Services</b>	C	Tim Ahern
13:50	0:45	<b>Network Reports</b> 3 Network Reports from Participants (3/9)	L	various
14:35	0:20	<b>IRIS/FDSN Web Services</b>	C	Tim Ahern
14:55	0:30	<b>SEED Validation tools</b> jEvalResp, jPlotResp		Rick Benson
15:25	0:20	<b>Break</b>		
15:45	0:30	Introduction to PQLX	L	Mary Templeton
16:15	0:20	<b>Quality Assurance</b> PQLX as QA Tool	L	Mary Templeton
16:35	0:20	IRIS MUSTANG	L	Tim Ahern
16:55	0:30	ORFEUS Operations and Quality Assurance	L	Reinoud Sleeman
17:25	0:30	IRIS/IDA Quality Assurance	L	Peter Davis
17:55		<b>Adjourn</b>		
20:30	2:00	<b>OPTIONAL</b> PDCC Practice		Rick Benson & Tim Ahern

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17-Jan-2013	Thursday	DURATION			Le Royal hotel
	8:00	1:00	4 Network Reports (4/13)	L	Various
	9:00	0:30	USArray Quality Assurance	L	Mary Templeton
	9:30	0:30	<b>Network Reports</b> 2 Network Reports (2/15)	L	Various
	10:00	0:30	<b>Break</b>		
	10:30	2:00	<b>Calibration Issues</b> <b>Measuring Noise</b>	L L	Erhard Wielandt Erhard Wielandt & Peter Davis
	12:30	1:15	<b>Lunch</b>		
	13:45	1:15	<b>Scientific Uses of Modern Seismological Data</b> The many uses of continuous broadband data	L	Prof. Goran Ekstrom
	15:00	0:45	<b>Network Reports</b> 3 Network Reports from Participants (3/18)	L	various
	15:45	0:30	<b>Break</b>		
	16:15	1:00	<b>Accessing Real Time Data and Data Sharing</b> SeedLink Seisgram2K TurnKey SeedLink server miniseed2dmc	C	Rick Benson & Tim Ahern
	17:15	1:30	<b>Seiscomp-3</b> Using SeisComp3 for real time data sharing	L	Reinoud Sleeman
	18:45		<b>Meeting Adjourns</b>		
	19:00		<b>Farewell Dinner</b> Presentation of Certificates		Hosted by KISR & IRIS (@KISR Club)
<b>Evening Assignment</b>			<b>Completion of Workshop Evaluation Forms</b>		

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18-Jan-2013	Friday	DURATION		Le Royal hotel
	8:00	1:30	<b>Waveform Utilities</b> conversion of data to miniSeed manipulating miniSeed libmseed - msi, msmod, msrouter	Rick Benson
	9:30	1:00	<b>Network Reports</b> 4 Network Reports (4/22)	
	10:30	0:30	<b>Break</b>	
	11:00	1:00	<b>Scientific Uses of Modern Seismological Data</b> Moment tensors and the Global CMT Project	L Goran Ekstrom
	12:00	1:15	<b>Lunch</b>	
	13:15	0:30	IRIS Products	L Tim Ahern
	13:45	0:30	SeisCode	L Tim Ahern
	14:15	1:00	Cross Correlation and Noise Tomography	L Goran Ekstrom
	15:15	1:00	<b>Network Reports</b> 4 Network Reports from Participants (4/26)	L various
	16:15	0:10	Wrapup	L Tim Ahern
	16:25		<b>Adjourn (end of Metadata Workshop)</b>	
	evening		An Optional Social Event to be announced at the workshop	
<b>19-Jan-2012</b>	<b>SATURDAY</b>		Metadata Workshop Participants Depart unless attending ASI Workshop	
			<b>IRIS International Development Seismology Advanced Studies Institute Workshop Begins</b>	