
	FP7-ICT 619209 / AMIDST 27/09/2014 Page 1 of 69	
---	---	---

Project no.: 619209
Project full title: Analysis of Massive Data STreams
Project Acronym: AMIDST
Deliverable no.: D2.1
Title of the deliverable: The AMIDST modelling framework – Initial draft report

Contractual Date of Delivery to the CEC:	30.09.2014
Actual Date of Delivery to the CEC:	29.09.2014
Organisation name of lead contractor for this deliverable:	AAU
Author(s):	Hanen Borchani, Antonio Fernández, Odd Erik Gundersen, Sigve Hovda, Helge Langseth, Anders L. Madsen, Ana M. Martínez, Ramón Martínez, Andrés Masegosa, Thomas D. Nielsen, Antonio Salmerón, Frode Sørmo, Galia Weidl
Participants(s):	P01, P02, P03, P04, P05, P06, P07
Work package contributing to the deliverable:	WP2
Nature:	R
Version:	1.0
Total number of pages:	69
Start date of project:	1st January 2014 Duration: 36 month

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Abstract:

In this document, we explore the nature and the temporal structure of the different family distributions exhibited by the data for the three use-case providers. Based on these findings and the expert knowledge provided, we present use-case-tailored models that address the application scenarios identified in deliverable 1.2. Building on the commonalities of these specific models, we introduce the AMIDST modelling framework as a general model that is capable to automatically learn from data and take advantage of potential domain knowledge. This document also contains a detailed description of the employed data analysis and modelling techniques.

Keyword list: AMIDST modelling framework, application scenarios, preliminary models, data analysis, Bayesian networks, dynamic Bayesian networks, conditional linear Gaussian models.