Rotorcraft Conference 2014

Technology: Friend or Foe? The Introduction of Automation to Offshore Operations

London, United Kingdom 3 – 4 July 2014

ISBN: 978-1-63439-095-8

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2014) by the Royal Aeronautical Society All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the Royal Aeronautical Society at the address below.

Royal Aeronautical Society No. 4 Hamilton Place London W1J 7BQ United Kingdom

Phone: +44 (0) 20 7670 4300 Fax: +44 (0) 20 7670 4309

www.raes.org.uk

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2634

Email: curran@proceedings.com Web: www.proceedings.com

TABLE OF CONTENTS

KEYNOTE DAY 1:	
Safe Operations in an Age of Constant Change - Oversight and the Continuous Improvement Cycle Mark Swan	1
SESSION 1: SETTING THE SCENE	
Overview of Offshore Operations	9
The Introduction of Automation to Offshore Operations - the Chronology	23
Automation Upsets in the Complex Helicopter - the Accidents and Incidents	N/A
SESSION 2: TECHNOLOGY – A LOOK BACK IN TIME	
"The Future Flight Deck" Were the Lessons Learnt - the Carry Across to Offshore Operations?	
Experiences from Fixed Wing - Are the Lessons Transferrable? Mark Cameron	46
SESSION 3: THE MODERN COCKPIT IN COMPLEX HELICOPTERS	
The Role of the Pilot: Human Centric Design	61
Working with Interface Limitations Steve Jarvis	N/A
The Development of the Autopilot	78
Reducing Complexity in HMI Design David Speed	N/A
Flight Simulation Training Devices for Complex Helicopters Nick Norman	91
KEYNOTE DAY 2:	
Safe Operations in an Age of Constant Change - Keeping the Operator/Crew in Control	N/A
SESSION 4: OPERATIONAL CONTROL	
The Role of the Operator - Ensuring Operational Safety When Introducing an Automated Environment	97
Ian Scott	
Achieving Common (Best Practice) Operational Standards	
Making Appropriate Use of FDM Information	124
LOSA & Threat and Error Management - Understanding and Tolerating Upsets in the Automated Systems	137
Simon Stewart	

SESSION 5: ENSURING COMPETENCY IS ATTAINED AND RETAINED

Regulation of Training - The Need for Vision in Regulations	N/A
Richard Dane	
The Introduction of ATQP	150
Keith Dyce	
"Learning from the Positive" - the Evidence-based Training Concept	166
Mike Varney	
What are the Requirements for a Complete Training System?	183
Duncan McKechnie	
Author Index	