USAID Tag Programming Specification

Author(s):	Oleg Iagounov
Contributor(s):	
Reviewer(s):	Jesper Boller
Filename:	USAID Tag Programming Specification.docx
Document:	077.200.113
Revision Date:	12/20/2017

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

Revision History Table

Table 1. Revision History.

Revision	Changes Since Previous Revision
1	This is the original release of the document.
2	Update with actual tag encoding
3	Updated with badge tag encoding

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

TABLE OF CONTENTS

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

1 INTRODUCTION

This document describes programming format for the USAID truck windshield, seal and personal badge tags. This specification will be provided to tag vendors so that all supplied tags are delivered appropriately programmed for the application.

1.1 General programming scheme

Memory bank 01 (EPC)						
Bit Address						
Description	CRC	PC Word	Id ??	USAID tag id	Tag type id	Serial no
Value in hex	0xXXXX	0x3000	0xXX	0x470EEB903	0x0201	0xXXXXXXXXX
Range in hex	Calculated when programming the tag	Fixed	0x00 – 0xFF	Fixed	0x0000 – 0xFFFF	0x000000000 - 0xFFFFFFFFF
Range in decimal			0 – 255		0 - 65535	0 – 68.719.476.735

1.2 Used Tag type ids

1.2.1 Driver tag

Tag type id for driver tag are 0x0101

1.2.2 Truck tag

Tag type id for driver tag are 0x0201

1.2.3 Seal tag

Tag type id for driver tag are 0x0301

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

2 WINDSHIELD TAG PROGRAMMING FORMAT.

2.1 Data programming standard used

The application data format will be a closed loop custom format as described below. GS1 EPC Global or ISO formats will not be used.

2.2 Tag memory utilization

Bank 0 (Reserved)	Kill Password	Not used
	Write Protect Password	Not used
Bank 1 (EPC)		96 bits used for application data
Bank 2 (TID)	Factory serialization	Not used
Bank 3 (User Memory)		Not used

2.3 Memory Bank 1 (EPC) data structure

Memory bank 01 (EPC)						
Bit Address						
Description	CRC	PC Word	Id ??	USAID tag id	Tag type id	Serial no
Value in hex	0xXXXX	0x3000	0xXX	0x470EEB903	0x0201	0xXXXXXXXXX
Range in hex	Calculated when programming the tag	Fixed	0x00 – 0xFF	Fixed	Fixed	0x000004E20 - 0x0000061A7
Range in decimal			0 – 255			000020000 – 000024999

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

3 BADGE TAG PROGRAMMING FORMAT.

3.1 Data programming standard used

The application data format will be a closed loop custom format as described below. GS1 EPC Global or ISO formats will not be used.

3.2 Tag memory utilization

Bank 0 (Reserved)	Kill Password	Not used
	Write Protect Password	Not used
Bank 1 (EPC)		96 bits used for application data
Bank 2 (TID)	Factory serialization	Not used
Bank 3 (User Memory)		Not used

3.3 Memory Bank 1 (EPC) data structure

Memory bank 01 (EPC)						
Bit Address						
Description	CRC	PC Word	Id	USAID tag id	Tag type id	Serial no
Value in hex	0xXXXX	0x3000	0x01	0x470EEB903	0x0101	0xXXXXXXXXX
Range in hex	Calculated when programming the tag	Fixed	0x00 – 0xFF	Fixed	Fixed	0x000003A98 - 0x000004E1F
Range in decimal			0 – 255			000015000 – 000019999

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

4 SEAL TAG PROGRAMMING FORMAT.

4.1 Data programming standard used

The application data format will be a closed loop custom format as described below. GS1 EPC Global or ISO formats will not be used.

4.2 Tag memory utilization

Bank 0 (Reserved)	Kill Password	Not used
	Write Protect Password	Not used
Bank 1 (EPC)		96 bits used for application data
Bank 2 (TID)	Factory serialization	Not used
Bank 3 (User Memory)		Not used

4.3 Memory Bank 1 (EPC) data structure

Memory bank 01 (EPC)						
Bit Address						
Description	CRC	PC Word	Id	USAID tag id	Tag type id	Serial no
Value in hex	0xXXXX	0x3000	0x02	0x470EEB903	0x0301	0xXXXXXXXXX
Range in hex	Calculated when programming the tag	Fixed	0x00 – 0xFF	Fixed	Fixed	0x000000000 - 0xFFFFFFFFF
Range in decimal			0 – 255			0 – 68.719.476.735

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com

5 PROGRAMMING FORMAT SIGNOFF

The programming format specified in this document has been reviewed and approved by the following parties:

Name	Title	Company	Signature	Date
Oleg Iagounov	Senior Developer	Lyngsoe Systems		
Jesper Boler	Project Manager	Lyngsoe Systems		
Carlos Roberto Mejia	IT Specialist	USAID		

6 NOTES AND COMMENTS

Lyngsoe Systems Ltd.
101 Simona Dr, Unit 2,
Bolton, L7E 4E8, Ontario, Canada

Tel. +1 905 501 1533
info@lyngsoesystems.com
www.lyngsoesystems.com