

Polymach Systems Limited

Presented to:

British Computer Society, London

November 2014

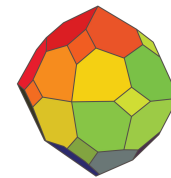
Presented by:

Abraham Zaaiman (Abri)

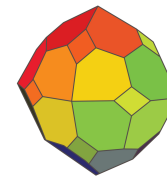
John Bisseru

Polymach Systems Limited

A New Computing Paradigm



**polymach
fornax**



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fornax**

Introduction

Overview

Concept

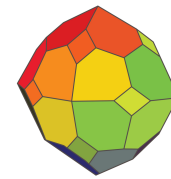
Components

Configurations

Applications

Roadmap

Summary



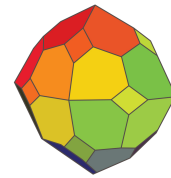
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fornax

Introducing Polymach ...

... a NoSQL object store technology

Polymach Fornax is a NoSQL object storage and processing system which:

- Is fast, secure & reliable
- Small footprint
- Configurable
- Easy to use and to program
- Extensible

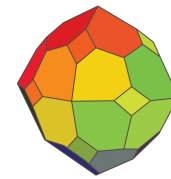


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The Origins Of Polymach ...

... relates to the laws of nature





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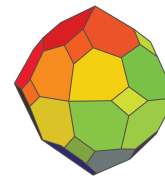
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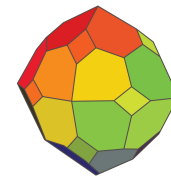
Roadmap

Summary



Polymach objects ...

- Fornax objects are entirely self-contained
- Needs only a Fornax DLL to function
- All information stored in object form
- All information communicated in object form
- All information processed in object form
- Objects are self-protecting
- Machine independent
- Access controlled
- Encrypted (optionally)
- Contains both code and data



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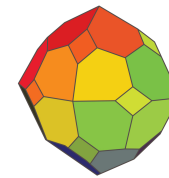
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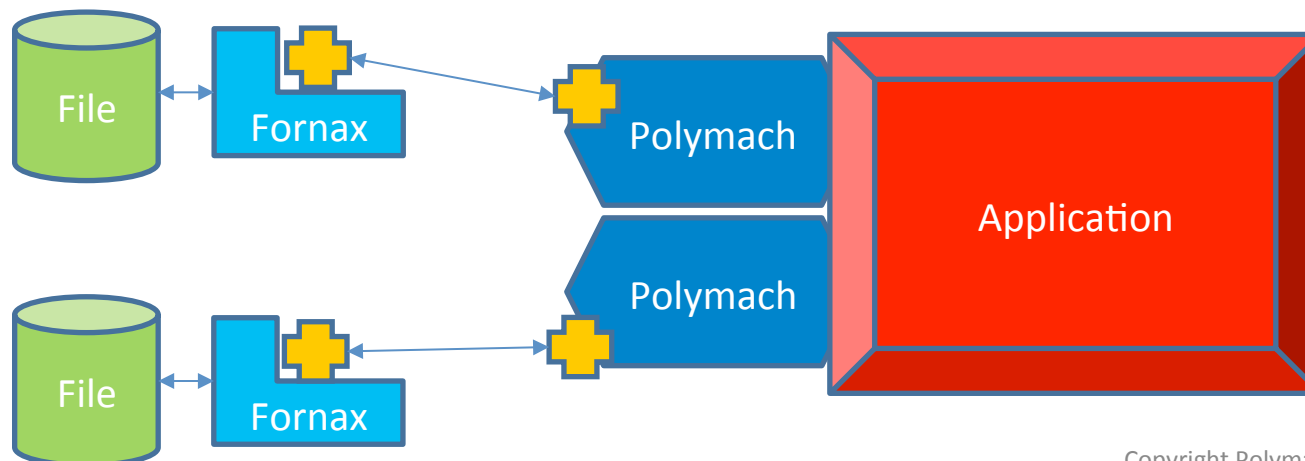


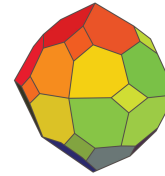
Concepts ...

... an overview

Polymach Fornax creates and manages virtual processing platform:

- Polymach is the client-side API
- Fornax is the processing and storage engine
- Information communicated, stored and processed in Polymach Binary Format





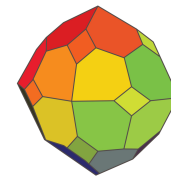
The Polymach API & Fornax Engine ...

Polymach API Provides:

- IDE friendly interface to Fornax universe
- Ports for C# is available on .NET 4 and 4.5
- Ports for C++ under test (from previous versions)
- Remote Fornax and in-process Fornax configurations
- Polymach is a DLL (approx. 120 KB, including a Fornax Engine)
- Extensions to Java, Perl, Python, C: on request.

Fornax:

- One engine instance per storage file
- Multiple Fornax instances per engine
- No locking
- Fast
- Small footprint
- Secure



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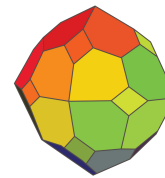
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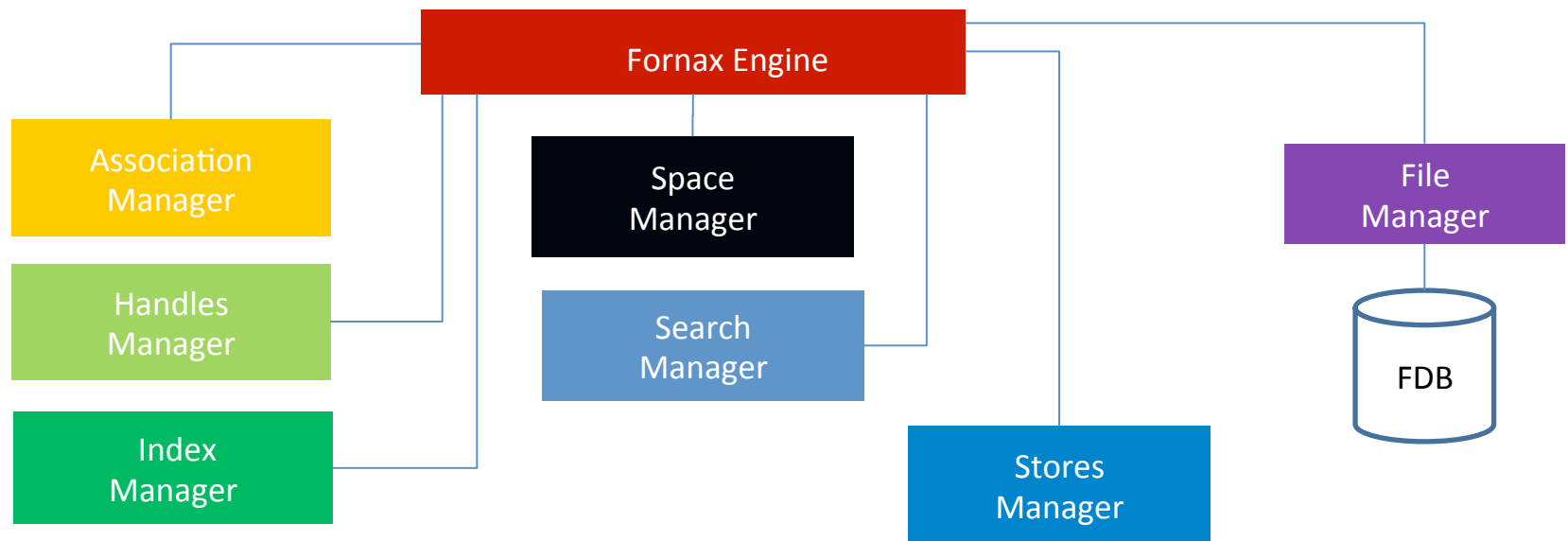
Roadmap

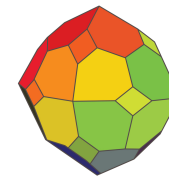
Summary



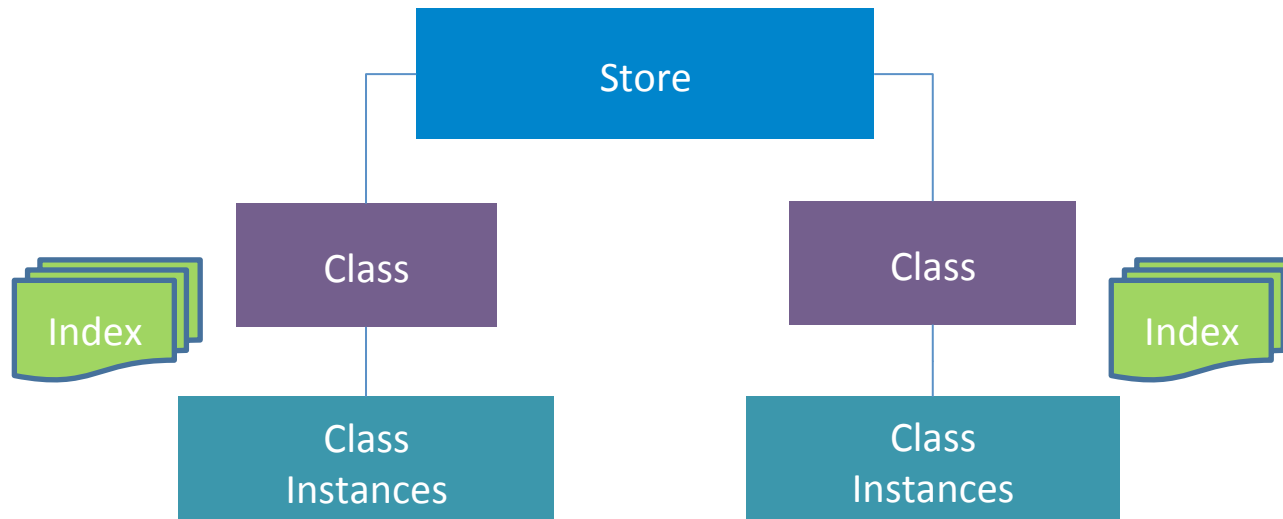
Fornax Main Components ...

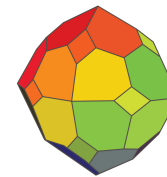
... logical components





Fornax Stores ...





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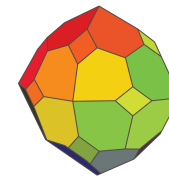
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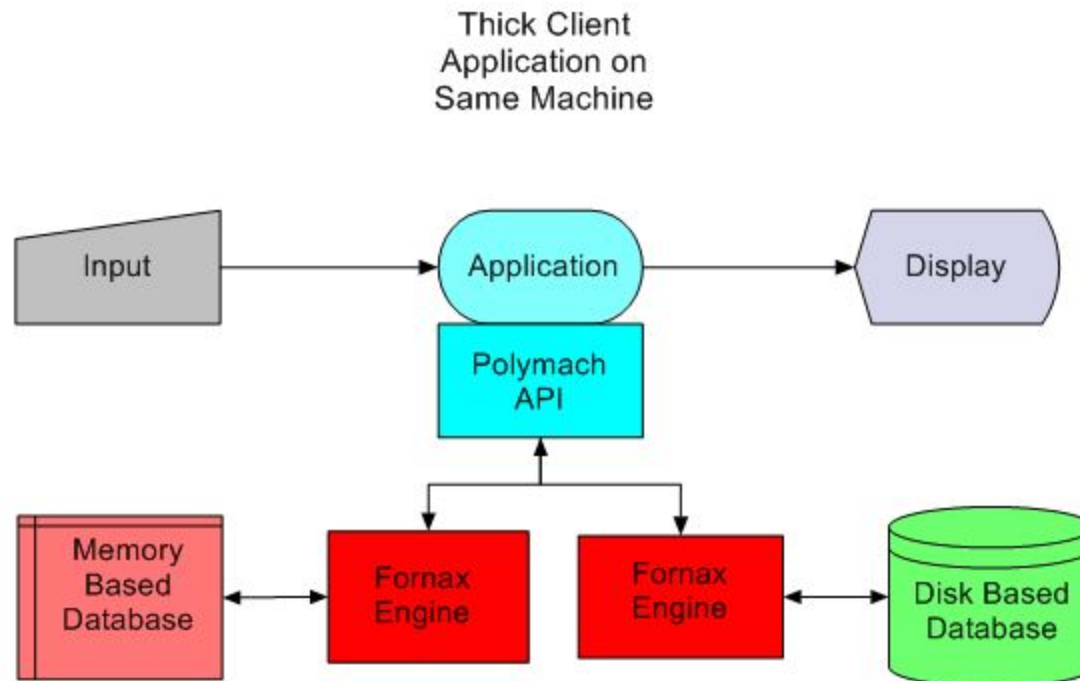
Applications

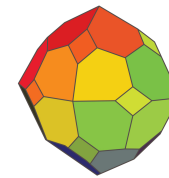
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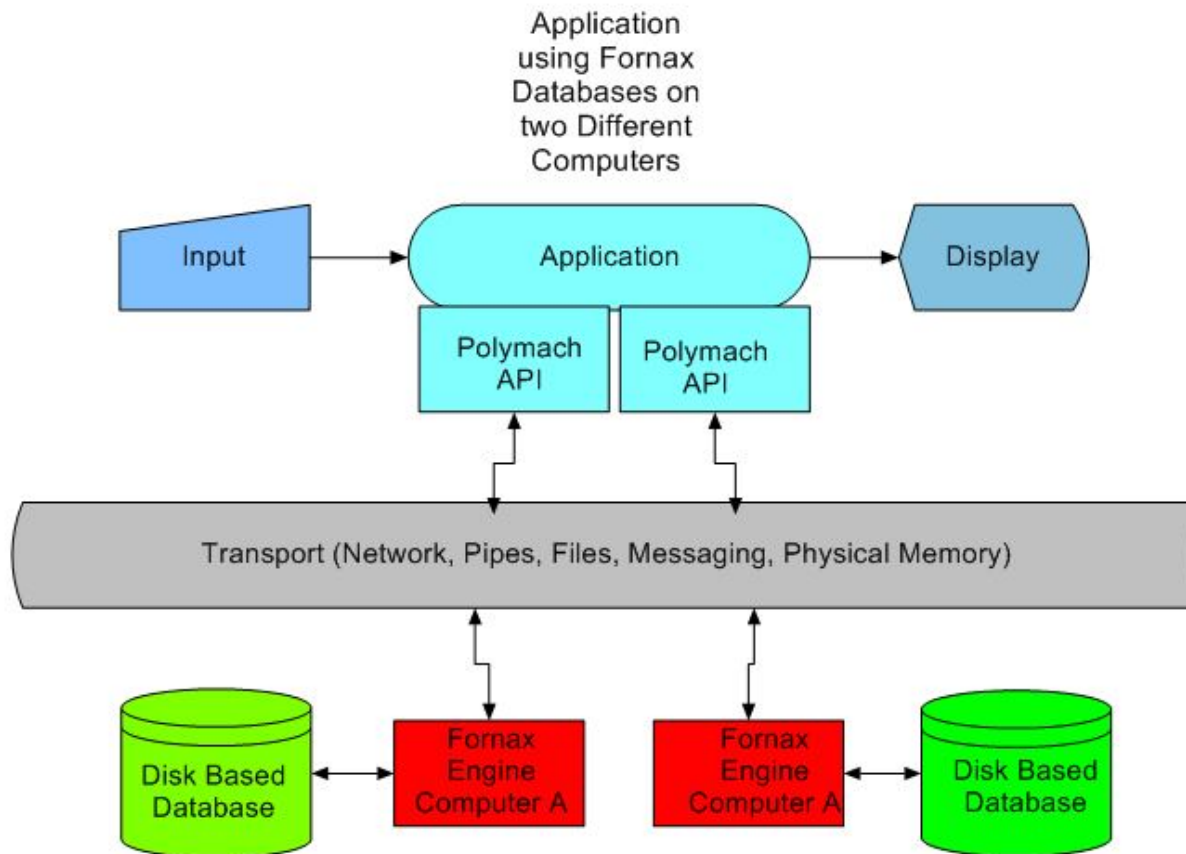


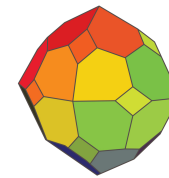
Polymach Application (Thick Client) ...



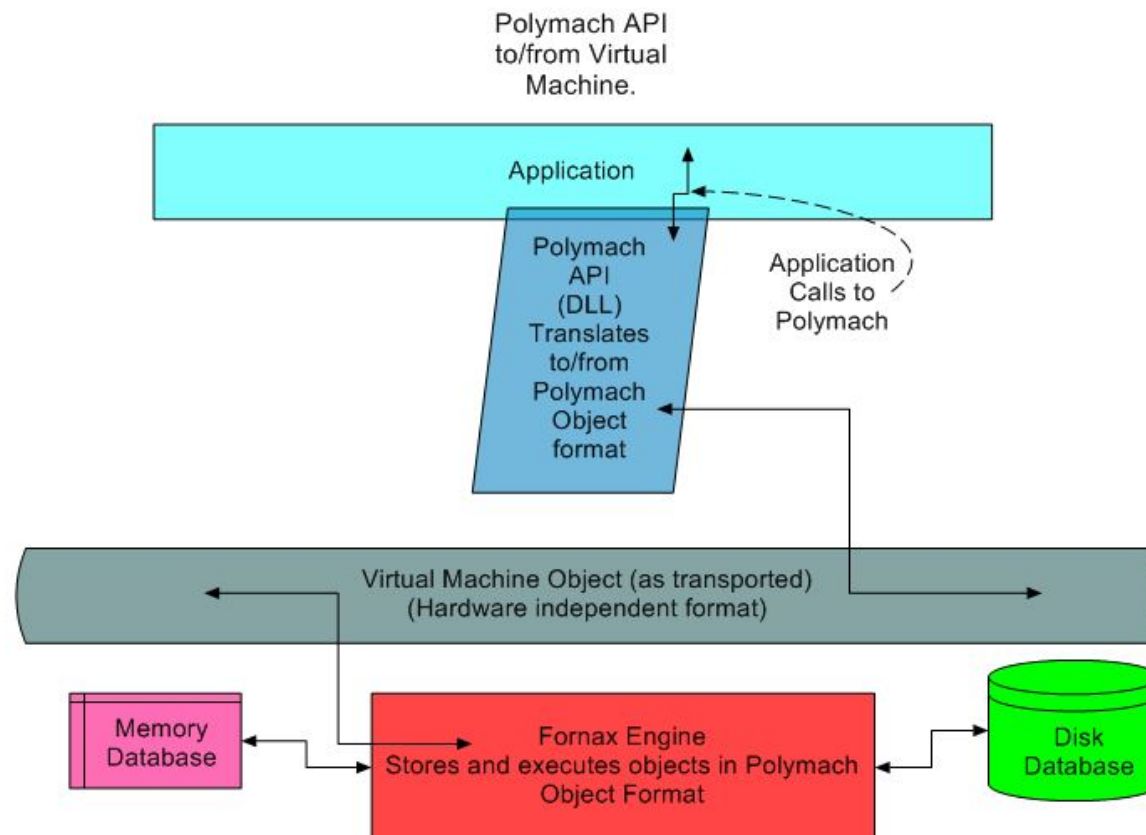


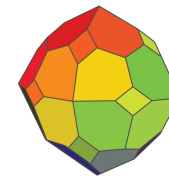
Polymach (Thin Client) ...



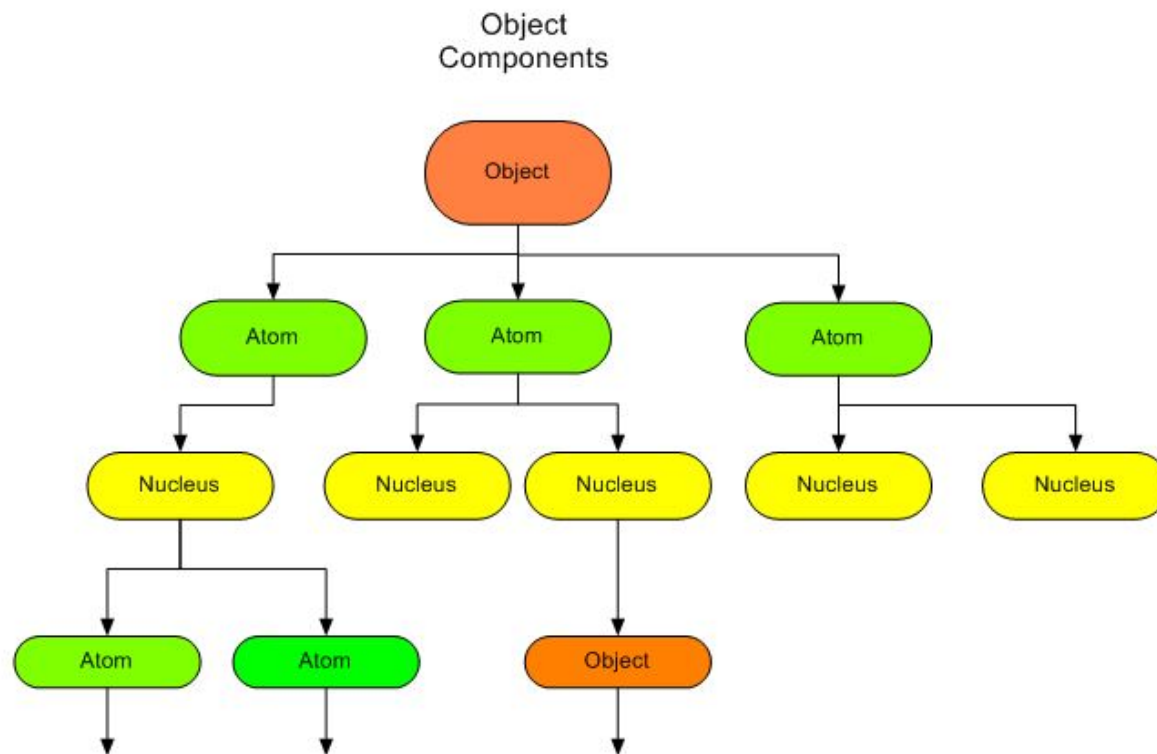


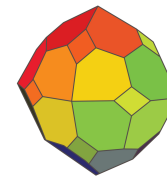
Polymach Virtual Machine Interface ...





Polymach Objects ...





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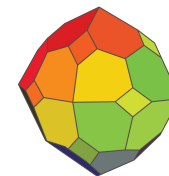
Components

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Polymach Applications: Dispatch Management ...

Area Management Form

Delivery Areas

Delivery Area Name	Channel	Report No.
MULZENBERG		370
NORWOOD		371
OKDALE		372
OCEANVIEW		6482
OTTERTY		381
PAARL		341
PANORAMA		105
PAROW		342
PHILLIPPI		6006
FINELANDS		6007

Management System

Import Invoices Data

Invoices

DelDate	Invoice	Customer	Address	Town	Comment	ShipTo
2010/03/29	0000540093	FRESH FISH M	KLIPFONTEIN ROAD	KLIPFONTEIN RD		DEFAU
2010/03/29	0000540094	SUNNI STORE	28 CHURCH STREET	STRANDFONTEIN		DEFAU
2010/03/29	0000540095	PICK'N'PAY IDU	DURBANVILLE CENTRE	CNR MAIN & WEL	URGENT DELIVER MR BEVI DISCUSS WITH QET	
2010/03/29	0000540096	ZOLANI JIVE	C/O DU-NOON	WAXBURY STR		DEFAU
2010/03/29	0000540097	OK MINIMARK	C/O CEDAR AVE & BOSCHOFF ROAD	C/O CEDAR AVE		DEFAU
2010/03/29	0000540098	SOLOMAN'S C	19 NERINA AVE	MALMESBURY		DEFAU
2010/03/29	0000540099	CEDAR SPAR	CNR VRYBURGER AVE & BOTHMA STR	BOTHASIG	Contact person: Janice	35550
2010/03/29	0000540100	BELHAR SUP	MODDERDAM ROAD	MODDERDAM RD	Delivery Thursday 01.04.10 @ 08h00 please	35353
2010/03/29	0000540101	CEDAR SPAR	CNR VRYBURGER AVE & BOTHMA STR	BOTHASIG		35550
2010/03/29	0000540102	TREND SALES	125 BELVEDERE ROAD	125 BELVEDERE		DEFAU
2010/03/29	0000540103	SR STATION	FW STATION PLAZA	7TH AVENUE		46286
2010/03/29	0000540104	CLT BLDG	OTC BLDG	CLT BLDG		46286

Invoice Items

Invoice	Item	Description	Packing	Units
0000540093	JVM1500	6 * 4 * 500ML JIVE MANGO TANGO	6x4x500mL	500mL
0000540093	JVM8500	6 * 4 * 500ML JIVE IRON BREW	6x4x500mL	500mL
0000540093	JVFP1500	6 * 4 * 500ML JIVE PASSION FRUIT & LEMONADE	6x4x500mL	500mL
0000540093	JVPS500	6 * 4 * 500ML JIVE PINE SPIKE	6x4x500mL	500mL
0000540093	JVGR500	6 * 4 * 500ML JIVE GRANADILLA	6x4x500mL	500mL
0000540093	JVCP500	6 * 4 * 500ML JIVE COCO PINE	6x4x500mL	500mL
0000540094	VENJGR2L	6 * 2LTR JIVE GRANADILLA	6x2L	2L
0000540094	VENJIA2L	6 * 2LTR JIVE APPLE SNAP	6x2L	2L
0000540094	VENJII2L	6 * 2LTR JIVE IRON BREW	6x2L	2L
0000540094	VENJIM2L	6 * 2LTR JIVE MANGO TANGO	6x2L	2L
0000540094	VENJIP2L	6 * 2LTR JIVE PINE WHIZZ	6x2L	2L
0000540094	VENJPS2L	6 * 2LTR JIVE PINEAPPLE SPIKE	6x2L	2L
0000540094	VENPFL2L	6 * 2LTR JIVE PASSION FRUIT & LEMONADE	6x2L	2L
0000540094	WMEGCRAT	2x BLACK CRATE	BLACK CRATE	CRATE
0000540094	JVPS500	6 * 4 * 500ML JIVE PINE SPIKE	6x4x500mL	500mL
0000540094	JVGB1500	6 * 4 * 500ML JIVE GINGER BEER LITE	6x4x500mL	500mL
0000540094	JVGR500	6 * 4 * 500ML JIVE GRANADILLA	6x4x500mL	500mL
0000540094	JVM8500	6 * 4 * 500ML JIVE IRON BREW	6x4x500mL	500mL

Set Delivery Date

Customer: BELHAR SUP

Message: Delivery Thursday 01.04.10 @ 08h00 please.

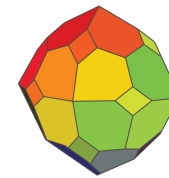
January 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Today: 2011/01/10

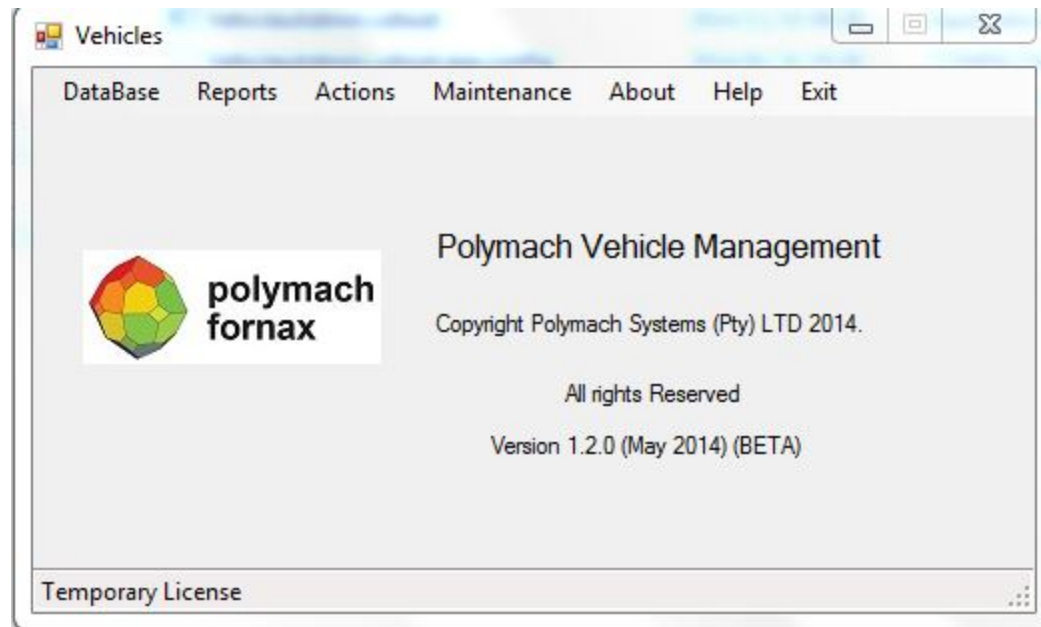
Delivery Date: 2011-01-10

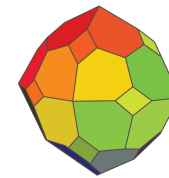
Controls: Cancel, Set Date



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Polymach Applications: Access Management 1 ...





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Polymach Applications: Access Management 2 ...

View Events

StockList Access List All Events

Display Access Events (Click on 'Key' column to select)

EID	DateTime	In/Out	Vehicle License	Vehicle Make	Vehicle Colour	Driver Name	Driver ID
eID1...	2014/07/29...	%FM-IN	DWP293FS	CHEVROLET	White / Wit	A	18086
eID1...	2014/07/29...	%FM-IN				M	17089
eID1...	2014/07/29...	%FM-IN				H	15080
eID1...	2014/07/29...	%FM-IN	FYT386EC	CHEVROLET	White / Wit	D	78088
eID1...	2014/07/29...	%FM-O...	FKV460FS	CHEVROLET	White / Wit	G	39082
eID1...	2014/07/29...	%FM-IN	FKL689FS	VOLVO	Silver / Silver	L	14083
eID1...	2014/07/29...	%FM-IN				H	33081
eID1...	2014/07/29...	%FM-IN	FMD611FS	CHEVROLET	Silver / Silver	J	48082
eID1...	2014/07/29...	%FM-IN	FKJ292FS	CHEVROLET	Maroon / Br...	E	79082
eID1...	2014/07/29...	%FM-O...	FJK001FS	CHEVROLET	Silver / Silver	T	33084
eID1...	2014/07/29...	%FM-IN	FMR507FS	CHEVROLET	White / Wit	M	92085
eID1...	2014/07/29...	%FM-IN	FFB729FS	CHEVROLET	Silver / Silver	E	74080
eID1...	2014/07/29...	%FM-IN	BG21MDGP	ISUZU	White / Wit	S	10084
eID1...	2014/07/29...	%FM-IN	FLN720FS	OPEL	Silver / Silver	A	59085
eID1...	2014/07/29...	%FM-IN				L	88081
eID1...	2014/07/29...	%FM-IN	FLR075FS	VOLKSWA...	Silver / Silver	L	65080
eID1...	2014/07/29...	%FM-IN	FML566FS	CHEVROLET	Silver / Silver	D	87081
eID1...	2014/07/29...	%FM-IN	CX94BMGP	ISUZU	White / Wit	J	60086
eID1...	2014/07/29...	%FM-IN	FLT047FS	CHEVROLET	White / Wit	M	88088
eID1...	2014/07/29...	%FM-IN	FFH747FS	NISSAN	White / Wit	N	58087
eID1...	2014/07/29...	%FM-IN	CR48PLGP	MAZDA	Silver / Silver	R	08083
eID1...	2014/07/29...	%FM-IN	FMN483FS	CHEVROLET	White / Wit	S	65083
eID1...	2014/07/29...	%FM-O...	FJP581FS	CHEVROLET	White / Wit	F	79088
eID1...	2014/07/29...	%FM-IN	CKY798FS	MERCEDE...	Silver / Silver	A	47088
eID1...	2014/07/29...	%FM-IN	BMJ451FS	ISUZU	White / Wit	N	24182
eID1...	2014/07/29...	%FM-IN	DSG381FS	FORD	White / Wit	R	78082
eID1...	2014/07/29...	%FM-IN	CLG331FS	ALFA ROM...	Red / Rooi	J	63088
eID1...	2014/07/29...	%FM-IN	HFK913EC	CHEVROLET	Silver / Silver	L	46083

Display Selectors

From: 04 June 2014

To: 13 November 2014

Selected Item

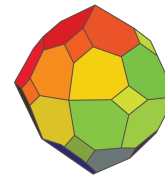
Controls

Close

Print

Export

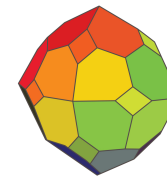
Help



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Polymach Utilities Programmer 1 ...





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Polymach Utilities Programmer 2 ...

FormEdit

Type	Displacement	Index	Item
atom	11		data word[3]{22, 65, 182}
atom	22	[0]	address word[6]{39, 47, 55, 60, 0, 0}
nucleus	39	[0][0]	engine uint{0}
nucleus	47	[0][1]	requestor uint{0}
nucleus	55	[0][2]	dbindex sbyte{0}
nucleus	60	[0][3]	session sbyte{0}
atom	65	[1]	request word[6]{82, 0, 0, 0, 0, 0}
atom	82	[1][0]	reference word[4]{95, 107, 0, 0}
nucleus	95	[1][0][0]	class string[8]{database}
atom	107	[1][0][1]	method word[3]{118, 134, 143}
nucleus	118	[1][0][1][0]	name string[12]{databaseOpen}
atom	134	[1][0][1][1]	argument word[2]{150, 175}
nucleus	150	[1][0][1][1][0]	name string[21]{c:\ProgramData\Fomax}
nucleus	175	[1][0][1][1][1]	name string[3]{abc}
atom	143	[1][0][1][2]	response word{0}
atom	182	[2]	response word[2]{191, 197}
nucleus	191	[2][0]	error word{0}
nucleus	197	[2][1]	erromes string[2]{OK}

Selector

New Object Add Atom Add Nucleus Add Instruction

Delete Modify Repack

Controls

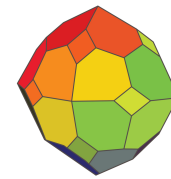
Close Save Load Help

Selected Item nucleus 150: [1][0][1][1][0] : name string[21]{c:\ProgramData\Fomax}

Object Type imageblock

MaxOff 203

Selected File



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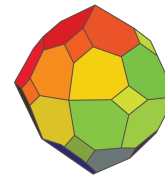
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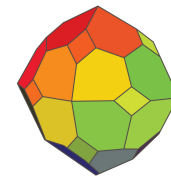
Polymach - Fornax Roadmap ...

Previous release: Polymach V2.1 C++ (C builder 6) (Windows)

Current release: Fornax - Polymach V12.0 C#, dot net 4.0, 4.5

The Future ...

- C# V70 Polymach, dot net 4.5 with C++ V70 Fornax (Windows) Dec 2014
- Polymach - Fornax for iOS and OSX – Q1 2015
- Fornax C++ V70 for Android, Q2 2015
- Fornax C++ V70 for Linux, Unix, Solaris, Q3 2015
- Polymach V70 Java port for use with C++ V70 Fornax engine Q4 2015
- Fornax C++ V70 for IBM mainframe, est. 2016/2017



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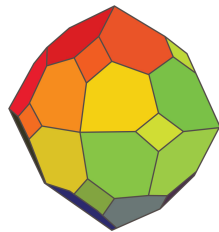
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