

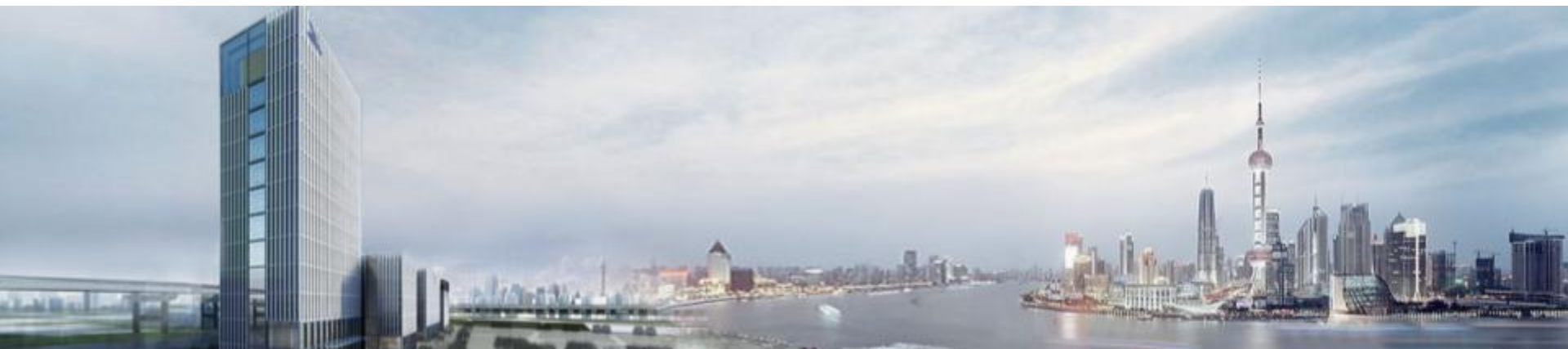


ISAP强度自动化分析平台经验交流

上飞院强度部

邹新煌

2017年3月



汇报内容

设计数据存储格式

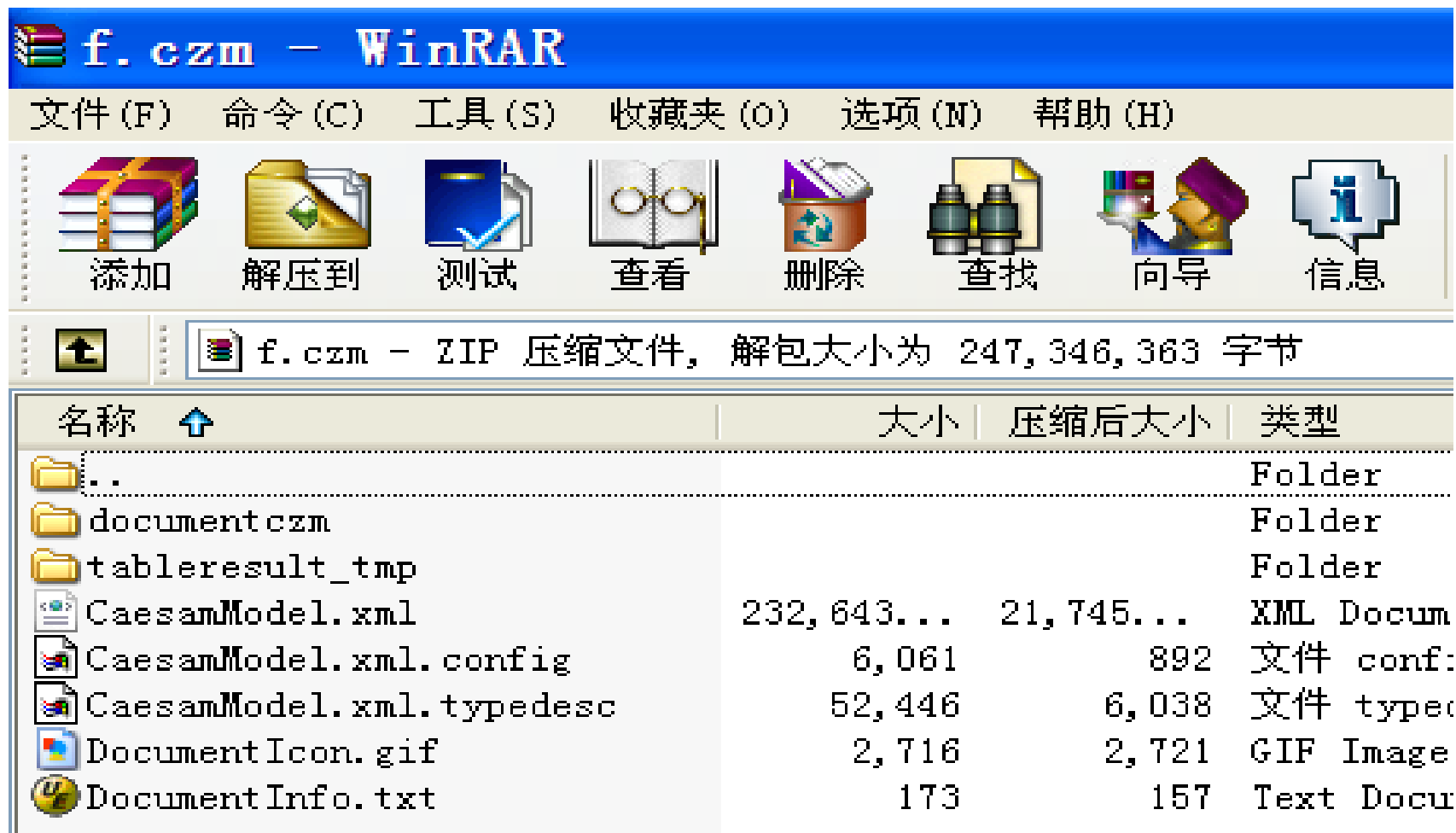


软件版本更新模式



数据库数据导入方式

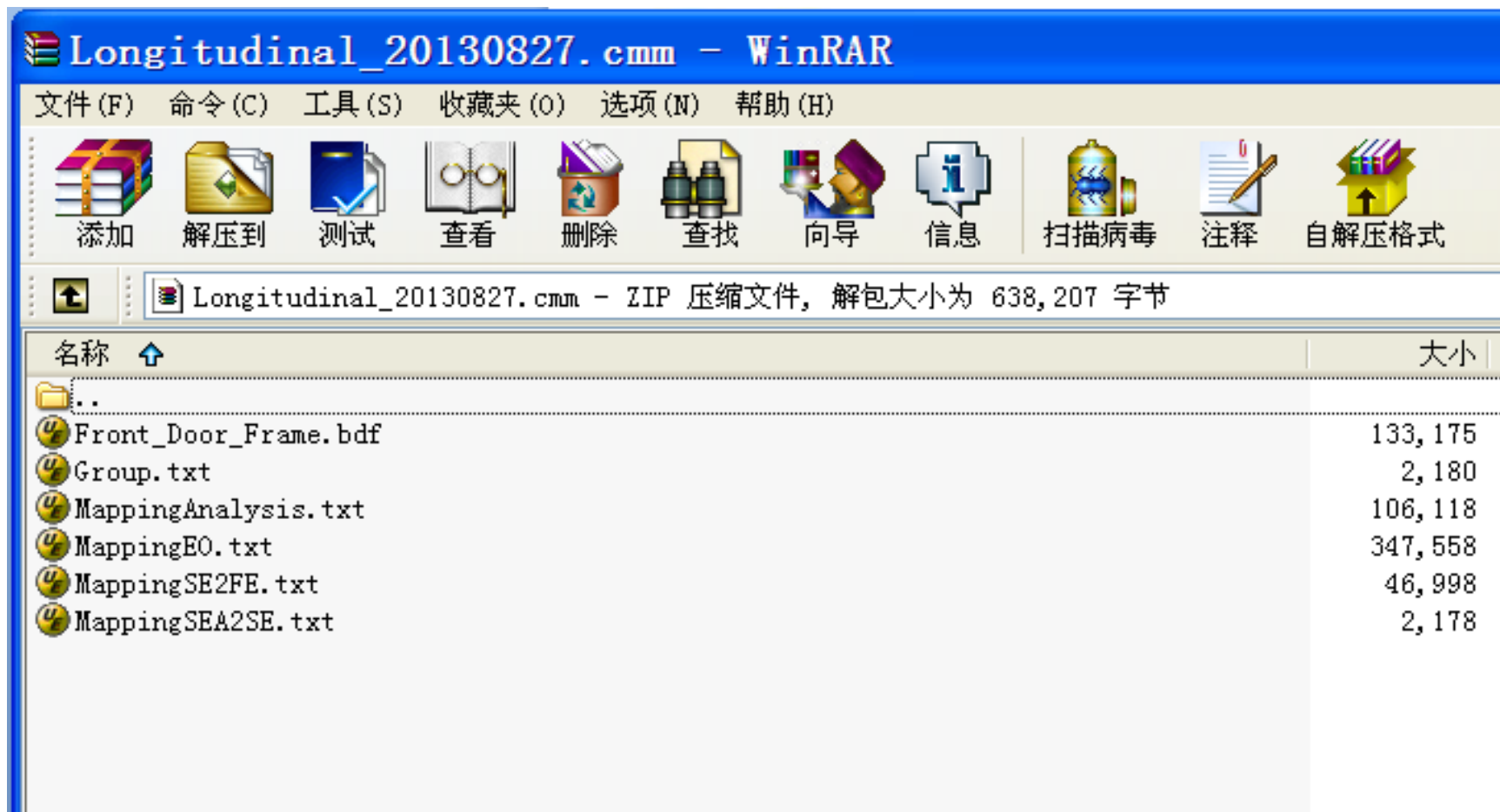




CZM文件格式

```
0 10 20 30 40 50 60
1 <?xml version="1.0" encoding="utf-8"?>
2 <Caesam Version="2.1" UnitSystem="mm,kg,N,deg" xmlns="http://www.samc
3 <Header Id="571474480" _IF="MODIFIED" _U="97eb64ff-358c-11e4-b939-f9e
4 <CreatedBy Id="571526032" _IF="MODIFIED">203499</CreatedBy>
5 <LastModifiedBy Id="571524624" _IF="MODIFIED">203499</LastModifiedBy>
6 <UnitSystem Id="617650624" _U="60bea0b2-6327-11e4-ba0e-bf44cc2bb066"
7 </UnitSystem>
8 <Mode Id="571532880" _IF="MODIFIED">CAESAM</Mode>
9 </Header>
10 <Data _I="CaesamStd_Model" Id="571694528" _IF="MODIFIED" _U="97eb650C
11 <CsmMbr_KeyMap Id="571747040" _MF="PLATFORM" _IF="MODIFIED" _U="97eb6
12 <_I _I="EO_MS_Setting" Id="572043168" _K="1f260f76-3b0f-11e4-b538-7fe
13 </_I>
14 <_I _I="CaesamStd_Run#1" Id="645708320" _K="3780f3e4-6326-11e4-ba0e-k
15 <CsmMbr_FileResource Id="617599568" _IF="MODIFIED" _U="60c102b6-6327-
16 <CsmMbr_FileUrl Id="617605936" _MF="PLATFORM">csm:documentcsm/Runs/37
17 </CsmMbr_FileResource>
18 <CsmMbr_RunState Id="659732832" _MF="PLATFORM">7</CsmMbr_RunState>
19 <CsmMbr_SubmitDate Id="645694032" _MF="PLATFORM">2014-11-03 14:52:11<
20 <CsmMbr_ProcessContext _I="Process_CaesamContext" Id="645693904" _MF=
21 </CsmMbr_ProcessContext>
```

CZM文件格式



CMM文件格式

test1.cmm - WinRAR

文件 (F) 命令 (C) 工具 (S) 收藏夹 (O) 选项 (N) 帮助 (H)

添加 解压到 测试 查看 删除 查找 向导 信息

test1.cmm - ZIP 压缩文件, 解包大小为 2,639,750 字节

名称	大小	压缩后大小	类型
..			Folder
log.txt	135	98	Text Document
MappingEO.xls	2,226,688	444,035	Microsoft Of...
MappingAnalysis.xls	11,776	2,562	Microsoft Of...
MappingSE2FE.txt	105,470	14,440	Text Document
MappingSEA2SE.txt	510	120	Text Document
Group.txt	0	2	Text Document
DoorFrame.bdf	295,171	43,975	文件 bdf

CMM文件格式

1、设计数据存储格式

MappingAnalysis.xls [兼容模式] - Microsoft Excel

开始 插入 页面布局 公式 数据 审阅 视图 开发工具 加载项

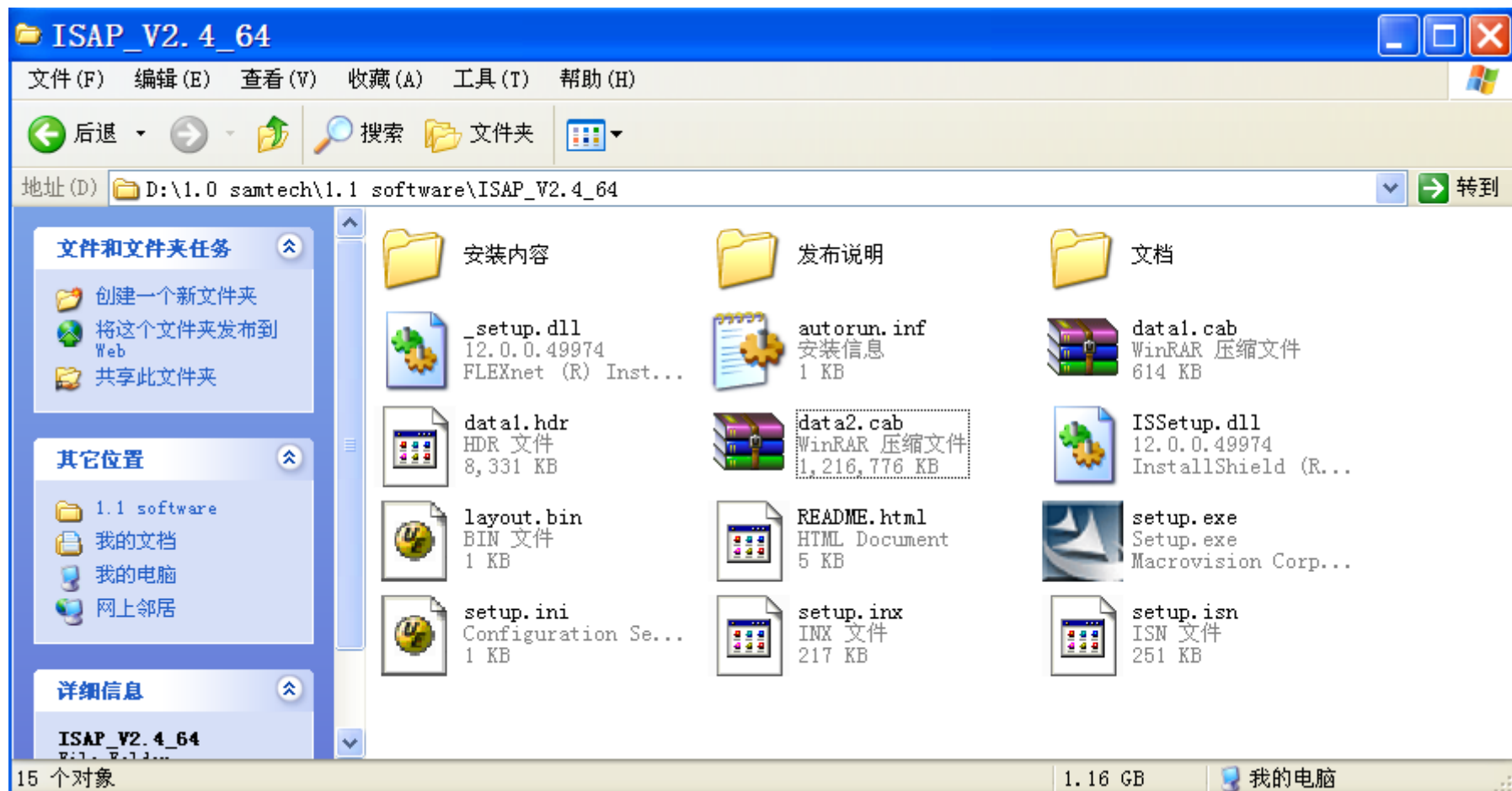
剪贴板 字体 对齐方式 数字 样式 单元格 编辑

	A	B	I	J	K	L	M	N	O
1	StringerSkin_Connection_Analysis-PanelMaterial	EOName	Th_min	Th_max	Basis	Ftu	Fty	Fcy	Fsu
2	Name								
3	StringerSkin_Connection_Analysis_Stringer2Panels_2213708	{Local}	0	0		0	0	0	0
4	StringerSkin_Connection_Analysis_Stringer2Panels_2213709	{Local}	0	0		0	0	0	0
5	StringerSkin_Connection_Analysis_Stringer2Panels_2213710	{Local}	0	0		0	0	0	0
6	StringerSkin_Connection_Analysis_Stringer2Panels_2213711	{Local}	0	0		0	0	0	0
7	StringerSkin_Connection_Analysis_Stringer2Panels_2213712	{Local}	0	0		0	0	0	0
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									

机身_静强度_长桁蒙皮连接-板材料 / 机身_静强度_长桁蒙皮连接-钉 / 机身

就绪 100%

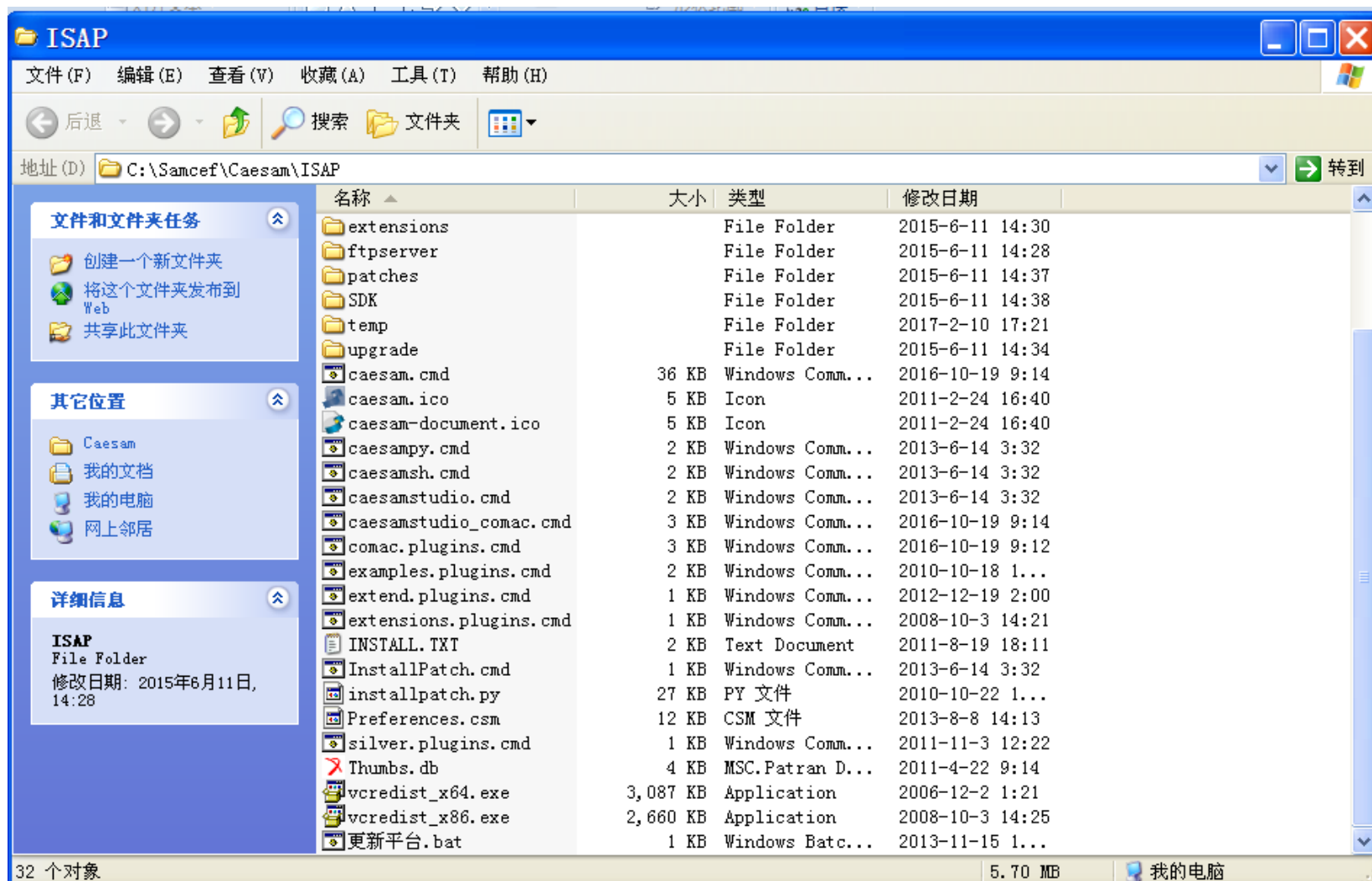
CMM文件格式



传统软件安装包



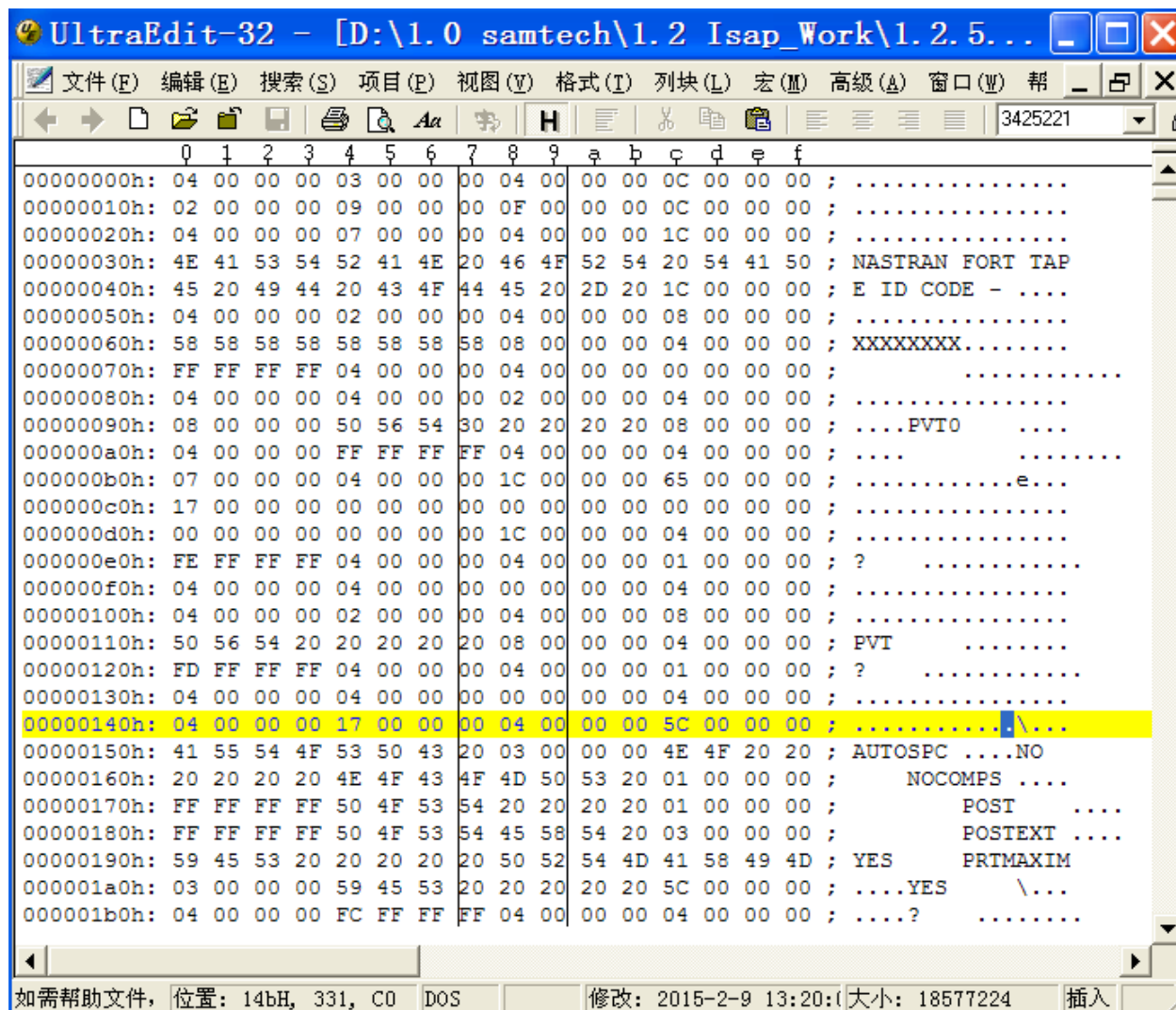
补丁升级包



The screenshot shows a Windows Explorer window titled "ISAP" with the address bar set to "C:\Samcef\Caesam\ISAP". The left sidebar shows the "文件和文件夹任务" (Tasks and folders) section with options like "创建一个新文件夹" (Create new folder) and "将这个文件夹发布到 Web" (Publish this folder to Web). The "其它位置" (Other locations) section shows "Caesam", "我的文档" (My documents), "我的电脑" (My computer), and "网上邻居" (Network places). The "详细信息" (Details) section shows the "ISAP" folder's modification date as "2015年6月11日, 14:28".

名称	大小	类型	修改日期
extensions		File Folder	2015-6-11 14:30
ftpserver		File Folder	2015-6-11 14:28
patches		File Folder	2015-6-11 14:37
SDK		File Folder	2015-6-11 14:38
temp		File Folder	2017-2-10 17:21
upgrade		File Folder	2015-6-11 14:34
caesam.cmd	36 KB	Windows Comm...	2016-10-19 9:14
caesam.ico	5 KB	Icon	2011-2-24 16:40
caesam-document.ico	5 KB	Icon	2011-2-24 16:40
caesam.py.cmd	2 KB	Windows Comm...	2013-6-14 3:32
caesamsh.cmd	2 KB	Windows Comm...	2013-6-14 3:32
caesamstudio.cmd	2 KB	Windows Comm...	2013-6-14 3:32
caesamstudio_comac.cmd	3 KB	Windows Comm...	2016-10-19 9:14
comac.plugins.cmd	3 KB	Windows Comm...	2016-10-19 9:12
examples.plugins.cmd	2 KB	Windows Comm...	2010-10-18 1...
extend.plugins.cmd	1 KB	Windows Comm...	2012-12-19 2:00
extensions.plugins.cmd	1 KB	Windows Comm...	2008-10-3 14:21
INSTALL.TXT	2 KB	Text Document	2011-8-19 18:11
InstallPatch.cmd	1 KB	Windows Comm...	2013-6-14 3:32
installpatch.py	27 KB	PY 文件	2010-10-22 1...
Preferences.csm	12 KB	CSM 文件	2013-8-8 14:13
silver.plugins.cmd	1 KB	Windows Comm...	2011-11-3 12:22
Thumbs.db	4 KB	MSC.Patran D...	2011-4-22 9:14
wcrist_x64.exe	3,087 KB	Application	2006-12-2 1:21
wcrist_x86.exe	2,660 KB	Application	2008-10-3 14:25
更新平台.bat	1 KB	Windows Batc...	2013-11-15 1...

32 个对象 5.70 MB 我的电脑



```

00000000h: 04 00 00 00 03 00 00 00 04 00 00 00 0C 00 00 00 ; .....
00000010h: 02 00 00 00 09 00 00 00 0F 00 00 00 0C 00 00 00 ; .....
00000020h: 04 00 00 00 07 00 00 00 04 00 00 00 1C 00 00 00 ; .....
00000030h: 4E 41 53 54 52 41 4E 20 46 4F 52 54 20 54 41 50 ; NASTRAN FORT TAP
00000040h: 45 20 49 44 20 43 4F 44 45 20 2D 20 1C 00 00 00 ; E ID CODE - ....
00000050h: 04 00 00 00 02 00 00 00 04 00 00 00 08 00 00 00 ; .....
00000060h: 58 58 58 58 58 58 58 58 08 00 00 00 04 00 00 00 ; XXXXXXXX.....
00000070h: FF FF FF FF 04 00 00 00 04 00 00 00 00 00 00 00 ; .....
00000080h: 04 00 00 00 04 00 00 00 02 00 00 00 04 00 00 00 ; .....
00000090h: 08 00 00 00 50 56 54 30 20 20 20 20 08 00 00 00 ; ....PVT0 ....
000000a0h: 04 00 00 00 FF FF FF FF 04 00 00 00 04 00 00 00 ; ....
000000b0h: 07 00 00 00 04 00 00 00 1C 00 00 00 65 00 00 00 ; .....e...
000000c0h: 17 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ; .....
000000d0h: 00 00 00 00 00 00 00 00 1C 00 00 00 04 00 00 00 ; .....
000000e0h: FE FF FF FF 04 00 00 00 04 00 00 00 01 00 00 00 ; ? .....
000000f0h: 04 00 00 00 04 00 00 00 00 00 00 00 04 00 00 00 ; .....
00000100h: 04 00 00 00 02 00 00 00 04 00 00 00 08 00 00 00 ; .....
00000110h: 50 56 54 20 20 20 20 20 08 00 00 00 04 00 00 00 ; PVT .....
00000120h: FD FF FF FF 04 00 00 00 04 00 00 00 01 00 00 00 ; ? .....
00000130h: 04 00 00 00 04 00 00 00 00 00 00 00 00 04 00 00 ; .....
00000140h: 04 00 00 00 17 00 00 00 04 00 00 00 5C 00 00 00 ; ..... \...
00000150h: 41 55 54 4F 53 50 43 20 03 00 00 00 4E 4F 20 20 ; AUTOSPC ....NO
00000160h: 20 20 20 20 4E 4F 43 4F 4D 50 53 20 01 00 00 00 ; NOCOMPS ....
00000170h: FF FF FF FF 50 4F 53 54 20 20 20 20 01 00 00 00 ; POST ....
00000180h: FF FF FF FF 50 4F 53 54 45 58 54 20 03 00 00 00 ; POSTEXT ....
00000190h: 59 45 53 20 20 20 20 20 50 52 54 4D 41 58 49 4D ; YES PRIMAXIM
000001a0h: 03 00 00 00 59 45 53 20 20 20 20 20 5C 00 00 00 ; ....YES \...
000001b0h: 04 00 00 00 FC FF FF FF 04 00 00 00 04 00 00 00 ; ....? .....
  
```

如需帮助文件, 位置: 14bH, 331, C0 DOS 修改: 2015-2-9 13:20:00 大小: 18577224 插入

OP2文件格式

```

232 (TOTAL DATA WRITTEN FOR DATA BLOCK = 345 WORDS.)
233 *** USER INFORMATION MESSAGE 4114 (OUTPX2)
234 DATA BLOCK MPTS WRITTEN ON FORTRAN UNIT 12 IN BINARY (LTLEND) FORMAT USING NDDL DESCRIPTION FOR MPT, TRL =
235 101 32768 0 0 0 0 0
236 NAME OF DATA BLOCK WRITTEN ON FORTRAN UNIT IS MPTS
237 (MAXIMUM POSSIBLE FORTRAN RECORD SIZE = 16386 WORDS.)
238 (MAXIMUM SIZE OF FORTRAN RECORDS WRITTEN = 123 WORDS.)
239 (NUMBER OF FORTRAN RECORDS WRITTEN = 20 RECORDS.)
240 (TOTAL DATA WRITTEN FOR DATA BLOCK = 154 WORDS.)
241 1 THIS IS A DEFAULT SUBCASE. JANUARY 20, 2017 MD NASTRAN 7/15/10 PAGE 5
242
243 0
244 *** USER INFORMATION MESSAGE 7310 (VECPRN)
245 ORIGIN OF SUPERELEMENT BASIC COORDINATE SYSTEM WILL BE USED AS REFERENCE LOCATION.
246 RESULTANTS ABOUT ORIGIN OF SUPERELEMENT BASIC COORDINATE SYSTEM IN SUPERELEMENT BASIC SYSTEM COORDINATES.
247 0 OLOAD RESULTANT
248 SUBCASE/ LOAD
249 DAREA ID TYPE T1 T2 T3 R1 R2 R3
250 0 1 FX 0.000000E+00 --- --- --- 0.000000E+00 0.000000E+00
251 FY --- -2.377621E+03 --- 4.102751E+06 --- -4.402640E+07
252 FZ --- --- 1.279529E+03 1.102952E+06 -2.369305E+07 ---
253 MX --- --- --- 0.000000E+00 --- ---
254 MY --- --- --- 0.000000E+00 --- ---
255 MZ --- --- --- 0.000000E+00 --- 0.000000E+00
256 TOTALS 0.000000E+00 -2.377621E+03 1.279529E+03 5.205703E+06 -2.369305E+07 -4.402640E+07
257 1 THIS IS A DEFAULT SUBCASE. JANUARY 20, 2017 MD NASTRAN 7/15/10 PAGE 6
258
259 0 SUBCASE 1
260 0
261 0 POINT SINGULARITY TABLE
262 ID TYPE FAILED STIFFNESS OLD USET NEW USET
263 ID DIRECTION RATIO EXCLUSIVE UNION EXCLUSIVE UNION
264 92135281 G 1 0.00E+00 B F SB S *
265 92135281 G 2 0.00E+00 B F SB S *
266 92135281 G 3 0.00E+00 B F SB S *
267 92135281 G 4 0.00E+00 B F SB S *
268 92135281 G 5 0.00E+00 B F SB S *
269 92135281 G 6 0.00E+00 B F SB S *
270 92135282 G 1 0.00E+00 B F SB S *

```

1	\$TITLE	= THIS IS A DEFAULT SUBCASE.					1
2	\$SUBTITLE	=2000000					2
3	\$LABEL	=					3
4	\$DISPLACEMENTS						4
5	\$REAL OUTPUT						5
6	\$SUBCASE ID =	1					6
7	1000	G	2.395656E-01	-1.358134E+00	2.342824E+00		7
8	-CONT-		-2.360110E-02	2.346171E-03	3.659101E-03		8
9	213813	G	-5.501977E-03	1.684229E-02	3.583359E-02		9
10	-CONT-		6.378508E-04	-1.152458E-03	6.247634E-04		10
11	213913	G	7.117052E-04	-3.686040E-03	-8.847585E-03		11
12	-CONT-		-1.576654E-04	4.102309E-04	-2.032007E-04		12
13	21036493	G	9.457253E-03	3.784073E-02	-7.594144E-03		13
14	-CONT-		8.494980E-04	-1.346523E-03	3.077826E-04		14
15	21036494	G	1.877130E-02	4.366519E-02	-7.250795E-03		15
16	-CONT-		8.658440E-04	-1.183818E-03	2.701636E-04		16
17	21036495	G	2.198370E-02	4.590353E-02	-2.316798E-03		17
18	-CONT-		7.443668E-04	-1.182851E-03	-3.351778E-05		18
19	21036496	G	1.774323E-02	4.231498E-02	1.832544E-03		19
20	-CONT-		9.590592E-04	-7.606982E-04	4.053393E-04		20
21	21036497	G	2.009020E-02	4.422605E-02	1.773655E-02		21
22	-CONT-		7.545103E-04	-1.328308E-03	-7.325067E-05		22
23	21036498	G	2.264823E-02	4.665644E-02	3.385006E-02		23
24	-CONT-		-3.039319E-04	-9.059870E-04	7.819061E-04		24
25	21036499	G	2.501905E-02	4.584396E-02	3.311984E-02		25
26	-CONT-		2.763844E-04	-1.440236E-03	-2.446587E-04		26
27	21036500	G	2.022108E-02	4.451813E-02	3.048455E-02		27
28	-CONT-		5.502212E-04	-1.362273E-03	-5.368417E-05		28
29	21036501	G	1.058616E-02	4.123842E-02	2.905145E-02		29
30	-CONT-		5.182443E-04	-1.499371E-03	-1.079404E-04		30
31	21036502	G	9.057646E-03	4.092744E-02	1.074122E-02		31
32	-CONT-		6.472134E-04	-1.490667E-03	1.190660E-04		32
33	21036503	G	2.441668E-02	4.694885E-02	1.439416E-02		33
34	-CONT-		5.013740E-04	-1.085343E-03	5.647273E-05		34
35	21036504	G	1.949897E-02	4.536106E-02	1.099045E-02		35
36	-CONT-		6.027294E-04	-1.344920E-03	1.661330E-05		36
37	21036505	G	8.977423E-03	2.996405E-02	-2.413247E-02		37
38	-CONT-		1.186845E-03	-1.005860E-03	5.006323E-04		38

建议：平台开发增加灵活性！

思考：往后，平台的出路在哪？

谢 谢
Thank you!