



THtml rev 2.0

Status and Plans of ROOT's
documentation facility

Axel Naumann / Fermilab

Recap – Why We Need a New One

Problems with old version:

- Inline methods
 - Inherited methods
 - Friends
 - Lack of speed
 - ClassImp, only one source file per class
- ... and more

Why We Need a New One (cont'ed)

Extensions we want:

- Non-ClassDef'ed classes (for ACLiC)
- Online, context sensitive help system
- Deliver doc as part of the release, “TBrowse” it
- Document PreProcessor macros
- ROOT bigger than 10 years ago: group by module, search (locally, using JavaScript)
- Allow different doc syntax, output formats

```
root [0] TH1* h=new TH1F("h","h",1,0.,1.);  
root [1] h->Fill(        )
```

2005-09-28

ROOT 2005 Users Workshop - Axel Naumann / Fermilab

Can't We Use Another Tool?

Could be Doc++, Doxygen,... Problems:

- ROOT doc syntax
- No interface to ROOT's RTTI
- No doc objects generated but text files
- No multiple, independent code packages
- No versioning

Answer: **NO.**

Goals – ROOT '04 and Today

Support for complete c++ syntax

friend, operator, inline, typedef, template, struct,...

Done (but templates)

C preprocessor and c++ parser

Current THtml doesn't parse c++ tokens but characters – slower & no way to integrate a code parser

Need CPP to get valid c++ and to document CPP macros

Done

Goals – ROOT '04 and Today

Fast (at least as fast as current)

Done (<15mins)

Small (only a few files, simple & clean interface)

Done (the interface part – 10k lines, 21 files)

Source “beautifier” understanding c++ syntax

To be done (but know how to do it)

Goals – ROOT '04 and Today

Documentation objects, independent of output

Content for ROOT's online help, doc objects in file

Generate HTML doc from file – parse once, output many

Almost done (C++ lib doc file: 200k)

Allow for non-ROOT doc syntax

Done

Some Candy

Proper error messages!

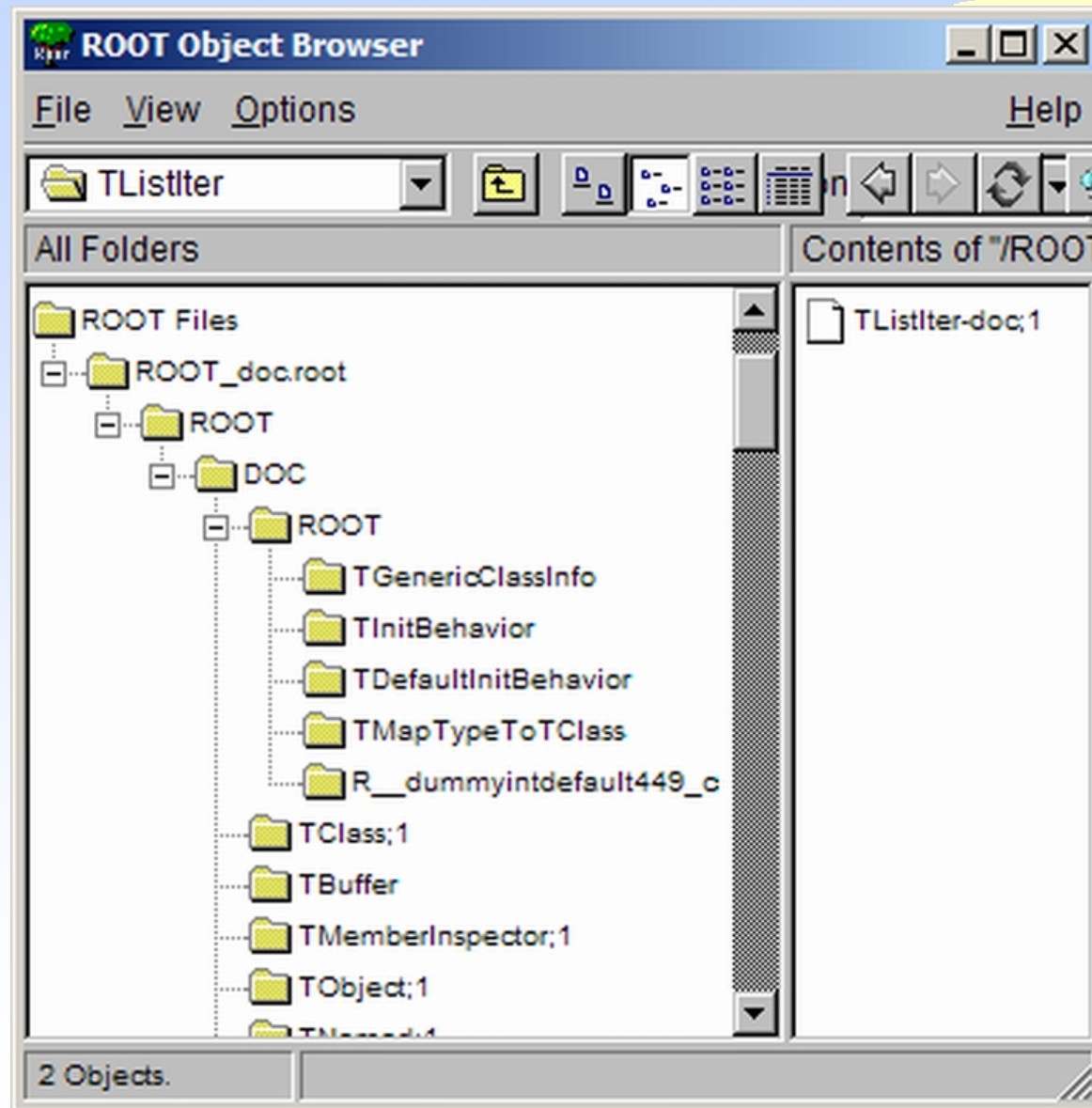
```
Warning: in file included from C:\root\base\src\TBuffer.cxx,  
  from C:\root\base\inc\TROOT.h,  
  from C:\root\base\inc\TDirectory.h,  
  from C:\root\base\inc\TNamed.h,  
  from C:\root\cont\inc\TList.h,  
  from C:\root\cont\inc\TSeqCollection.h,  
  from C:\root\cont\inc\TCollection.h,  
  from C:\root\base\inc\TString.h,  
  from C:\Program Files\MSCV.NET\Vc7\include\string,  
  from C:\Program Files\MSCV.NET\Vc7\include\istream,  
  from C:\Program Files\MSCV.NET\Vc7\include\ostream,  
  from C:\Program Files\MSCV.NET\Vc7\include\ios,  
  from C:\Program Files\MSCV.NET\Vc7\include\xlocnum,  
  from C:\Program Files\MSCV.NET\Vc7\include\streambuf,  
  from C:\Program Files\MSCV.NET\Vc7\include\xiosbase:  
C:\Program Files\MSCV.NET\Vc7\include\xlocale(465)  
  : public locale::facet  
<T1812> Type "locale::facet" not recognized
```

2005-09-28

ROOT 2005 Users Workshop - Axel Naumann / Fermilab

Some Candy

Look, it's on
my hard drive!



2005-09-28

ROOT 2005 Users Workshop - Axel Naumann / Fermilab

HTML Layout

Classes

Location: [Documentation Home](#) / [ROOT](#) / [version 4.01/01](#) / [Core](#) / [class TExMap](#)

#include "TExMap.h" link libCore CINT enabled

QuickLinks:

- [Class Description](#)
- [public Interfaces](#)
- [private Interfaces](#)
- [Inheritance](#)
- [Source](#)
- [Header](#)

class TExMap

Map with external hash

Description

This class stores a (key,value) pair using an external hash. The (key,value) are Long_t's and therefore can contain object pointers or any longs. The map uses an open addressing hashing method (linear probing).

public Methods & Members

[Hide Derived](#)

Expand All

Collaps All

```

⊕ TExMap(const TExMap& map)
⊕ TExMap(Int_t mapSize = 100)
⊕ virtual ~TExMap()
⊕ void AbstractMethod(const char* method) const [TObject:]
⊕ virtual void AppendPad(Option_t* option) [TObject:]
⊕ void Add(ULong_t hash, Long_t key, Long_t value)
⊕ void Add(Long_t key, Long_t value)
⊕ virtual void Browse(TBrowser* b) [TObject:]
⊕ Int_t Capacity() const
⊕ static TClass* Class()
⊕ virtual const char* ClassName() const [TObject:]
⊕ virtual void Clear(Option_t*) [TObject:]
⊕ virtual TObject* Clone(const char* newname) const [TObject:]

```

2005-09-28

ROOT 2005 Us

HTML Layout

Methods

- ⊕ **const char* ClassName() const**
- ⊕ **TObject* Clone(const char *) const**
- ⊕ **Int_t Compare(const TObject *) const**
- ⊕ **void Delete(Option_t *)**
- ⊕ **Int_t DistancetoPrimitive(Int_t, Int_t)**
- ⊕ **void Draw(Option_t *option)**
- ⊕ **void DrawClass() const**
- ⊕ **TObject* DrawClone(Option_t *option) const**
- ⊖ **void Dump() const**

Dump contents of object on stdout. Using the information in the object dictionary (class TClass) each data member is interpreted. If a data member is a pointer, the pointer value is printed

The following output is the Dump of a TArrow object:

```
fAngle          0          Arrow opening angle (degrees)
fArrowSize      0.2        Arrow Size
fOption.*fData
fX1             0.1        X of 1st point
fY1             0.15       Y of 1st point
fX2             0.67       X of 2nd point
fY2             0.83       Y of 2nd point
fUniqueID       0          object unique identifier
fBits           50331648   bit field status word
fLineColor      1          line color
fLineStyle      1          line style
fLineWidth      1          line width
fFillColor      19         fill area color
fFillStyle      1001      fill area style
```

- ⊕ **void Execute(const char *method, const char *params, Int_t *error)**
- ⊕ **void Execute(TMethod *method, TObjArray *params, Int_t *error)**
- ⊕ **void ExecuteEvent(Int_t, Int_t, Int_t)**
- ⊕ **TObject* FindObject(const char *) const**
- ⊕ **TObject* FindObject(const TObject *) const**
- ⊕ **Option_t* GetDrawOption() const**
- ⊕ **const char* GetName() const**
- ⊖ **const char* GetIconName() const**

2005-09-28

ROOT 2005 Users Workshop - Axel Naumann / Fermilab

HTML Layout

Module pane

[Show all Packages](#)

ROOT
version 4.01/01

Alphabetical List
 Expand All
 Collaps All

- ASImage
- Core [base]
- Core [cont]
- Core [meta]
- Core [net]
 - TAuthDetails
 - TAuthenticate
 - TCache
 - TCache::TCacheList
 - TCache::TPage
 - TFTP
 - TGridResult
 - THostAuth
 - TInetAddress
 - TMessage
 - TMessageHandler
 - TMonitor
 - TNetFile
 - TPServerSocket
 - TPSocket
 - TServerSocket
 - TSocket
 - TSocketHandler
 - TUrl
 - TWebFile

EG
 Fumili
 GX11

2005-09-28

ROOT 2005 Users Workshop - Axel Naumann / Fermilab

Status Summary

Dummy HTML output

Feedback: (optional) CSS, JavaScript, DHTML

Netscape 4.7 is dead!

Source and text beautifier to be done

Persistency & update mode almost done

Status Summary

But doc objects, CPP, parsing, doc parser are done!

...after 3 complete re-writes

(who said parsing C++ is easy?)

Into ROOT CVS when complete replacement of
current THtml

Goal: by the end of this year!