

5/18/2016

# An update on cmdapps

Caspar J. Goch

**dkfz.**

GERMAN  
CANCER RESEARCH CENTER  
IN THE HELMHOLTZ ASSOCIATION



50 Years – Research for  
A Life Without Cancer

Welcome  
to the DKFZ!

dkfz.

dkfz.

GERMAN  
CANCER RESEARCH CENTER  
IN THE HELMHOLTZ ASSOCIATION



50 Years – Research for  
A Life Without Cancer

## You previously learned how to

The screenshot shows a presentation slide with a blue header bar containing the text 'CTK - CommandLine Tools' and a progress indicator of 10 small circles. The main content area is white and contains the following text: 'Bug Squashing Seminar', 'CTK Commandline Parsing/Wrapping', 'Christian Weber', 'Medical and Biological Informatics (E130)', and 'May 20, 2014'. In the bottom right corner, there is a 'dkfz.' logo and a set of navigation icons. A blue footer bar at the bottom contains the text 'Christian Weber' and 'Bug Squashing Seminar', and a light blue bar above it contains 'Medical and Biological Informatics (E130)'.

CTK - CommandLine Tools  
○○○○○  
○○○○

Bug Squashing Seminar  
CTK Commandline Parsing/Wrapping

Christian Weber  
Medical and Biological Informatics (E130)

May 20, 2014

dkfz.

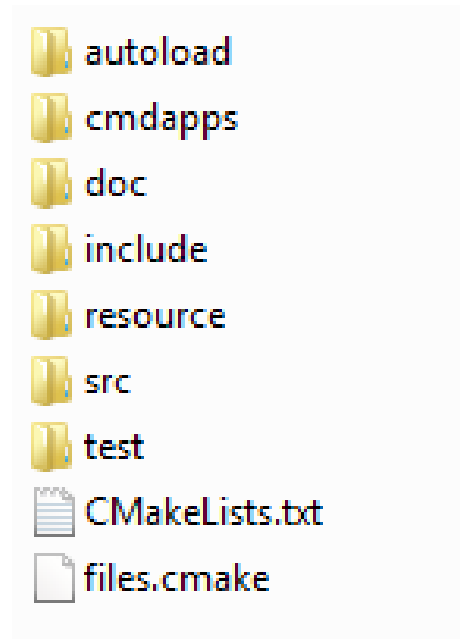
Navigation icons: back, forward, search, etc.






Christian Weber  
Bug Squashing Seminar

Medical and Biological Informatics (E130)

Generally use and configure  
the `ctkCommandLineParser`


## What has changed?



- Suggested structure
    - cmdapps in related module
  - MITK provides an adapted version of the `ctkCommandLineParser` in own module
- 
- ▲  MitkCommandLine
    - ▲  == Header Files ==
      - ▶  mitkCommandLineParser.h
    - ▲  == Source Files ==
      - ▶  mitkCommandLineParser.cpp

## What has changed?

- New cmake function to create cmdapps
  - Automatically provides dependency on mitkCommandLine

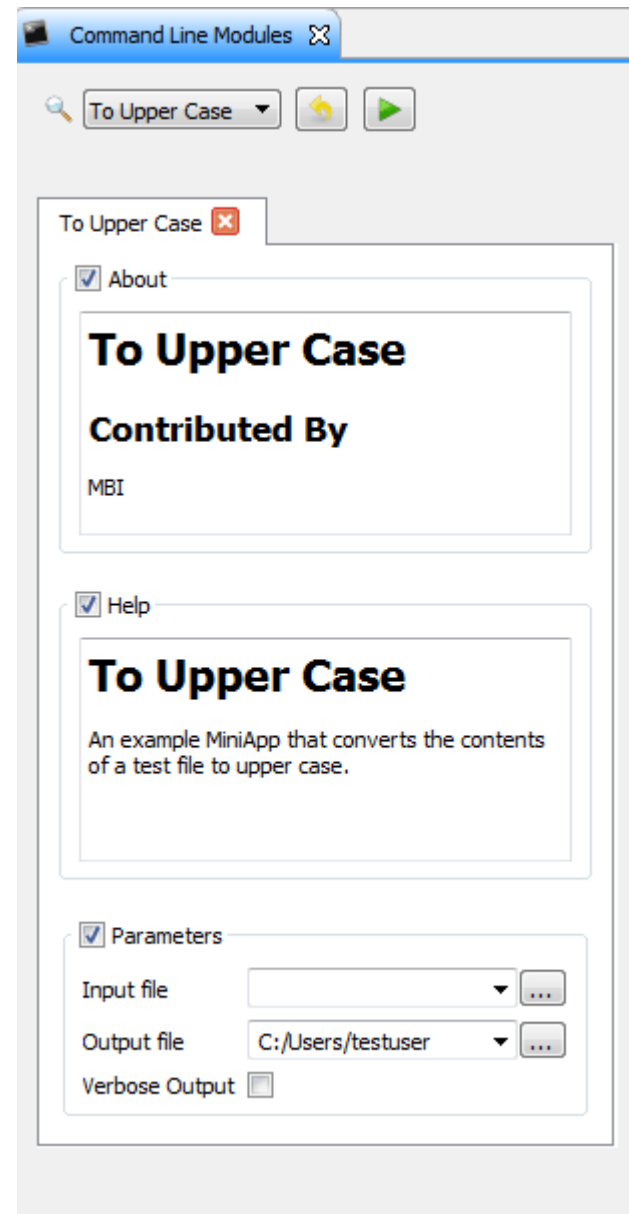
 CMakeLists.txt

 ExampleToUpperCaseMiniApp.cpp

```
CMakeLists.txt x
1  option(BUILD_NewModuleMiniApps "Build commandline tools for the example module" OFF)
2
3  if(BUILD_NewModuleMiniApps)
4
5      mitkFunctionCreateCommandLineApp (
6          NAME ExampleToUpperCaseMiniApp
7          DEPENDS MitkNewModule
8          PACKAGE_DEPENDS ITK
9          )
10
11  endif ()
12
```

## Can I integrate third party tools into the MITK Workbench

- Yes
  - Wrap any executable in a .bat/.sh file
  - Return your parameters as xml for `-xml`
  - Hand everything through otherwise
- Take care with paths, running a .bat directly or via MITK results in different current working directories



# Can I read more?

## How to create a MiniApp command line tool

This page will give you an overview of creating your own command line tool that can be integrated into a MiniApp. If you don't know about MiniApps, you can read about their purpose and use at [MITK MiniApps](#) page.

## What's a MiniApp command line tool?

A MiniApp command line tool allows for configuration of command line arguments and eases the access to these argument values. Additionally, a command line tool provides a XML representation of the configured arguments. This XML representation can be used for automatic user interface generation.

## Setting up a command line tool

This section describes the most important code parts of a command line tool using the [ExampleToUpperCaseMiniApp.cpp](#) as an example. See [How to create a new MITK Module](#) for a suggested structure of a new module and its MiniApps.

Each MiniApp contains its own main function.

```
int main( int argc, char* argv[] )  
{
```

Within the main function the first thing should be to configure the accepted arguments. This can be done using the [mitkCommandLineParser](#).

### Table of Contents

- ↓ What's a MiniApp command line tool?
- ↓ Setting up a command line tool
  - ↓ Example Help Output
- ↓ Retrieving XML argument description
  - ↓ Example XML Output

<http://docs.mitk.org/nightly/MiniAppCommandLineToolHowToPage.html>



Thank you  
for your attention!

Further information on [www.dkfz.de](http://www.dkfz.de)

**dkfz.**

GERMAN  
CANCER RESEARCH CENTER  
IN THE HELMHOLTZ ASSOCIATION



50 Years – Research for  
A Life Without Cancer