

SDCC 内での便利コマンド開発

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SDCC 内の状況

- Buffer box からのデータ : /sphenix/lustre01/sphnxpro/commissioning/INTT/
- INTT グループの作業場所 : /sphenix/tg/tg01/commissioning/INTT
 - ヒットベース、イベントベースの ROOT ファイル : /sphenix/tg/tg01/commissioning/INTT/root_files
 - マージした ROOT ファイル : /sphenix/tg/tg01/commissioning/INTT/merged_root_files

→どのランが SDCC ストレージにあるのか簡単に確認したい

→その他に作る便利コマンドを INTT グループで共有したい

→解析環境のセットアップを簡単にしたい

INTT グループ共有のセットアップディレクトリ

- 勝手に作りました : /sphenix/lustre01/sphnxpro/commissioning/INTT/repositories/libraries
 - intt_setup.sh : このスクリプトを実行すれば PATH, LD_LIBRARY_PATH などが設定される
 - bin : 今のところ、便利コマンドをおいている
 - lib : INTT グループで共有すべきライブラリを置く場所 (要検討)
 - include : INTT グループで共有すべきヘッダーファイルを置く場所 (要検討)

```
[nukazuka@sphnx05 17:02:45 libraries] $ ls  
bin  include  intt_setup.sh  intt_setup.sh~  lib
```

便利コマンド: intt_runs

SDCC にあるランの一覧を表示する

Usage: intt_runs [file type] [run type]

[file type]: evt hit_base event_base merged_event_base DST

[run type]: beam calib calibration cosmics junk pedestal

```
[nukazuka@sphnx05 17:08:20 libraries] $ intt_runs evt cosmics
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/
00021052
00021053
00021076
00021077
00021078
00021079
00021080
00021081
00021082
00021084
00021085
00021086
00021087
00021088
00021089
00021090
00021212
00024201
00024202
00024203
00024205
```

```
[nukazuka@sphnx05 17:10:30 libraries] $ intt_runs merged_event_base beam
/sphenix/tg/tg01/commissioning/INTT/merged_root_files/
00020864
00020866
00020867
00020868
00020869
00020878
00020880
00020881
00020883
00020885
```

便利コマンド: intt_runs_felix

SDCC にあるランの一覧を FELIX 毎に表示する

Usage: intt_runs_felix [file type] [run type]

[file type]: evt hit_base event_base merged_event_base DST

[run type]: beam calib calibration cosmics junk pedestal

```
[nukazuka@sphnx05 17:12:24 libraries] $ ls -l /sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/*00021080*
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt0-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt0-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt0-00021080-0002.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt0-00021080-0003.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt1-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt1-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt2-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt2-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt2-00021080-0002.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt3-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt3-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt3-00021080-0002.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt3-00021080-0003.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt4-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt4-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt5-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt5-00021080-0002.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt5-00021080-0003.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt5-00021080-0004.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt5-00021080-0005.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt6-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt6-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt6-00021080-0002.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt7-00021080-0000.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt7-00021080-0001.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt7-00021080-0002.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt7-00021080-0003.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt7-00021080-0004.evt
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics/cosmics_intt7-00021080-0005.evt
```



```
[nukazuka@sphnx05 17:11:08 libraries] $ intt_runs_felix evt cosmics
00021052 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021053 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021076 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021077 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021078 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021079 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021080 : 0 (0, 1, 2, 3, ) 1 (0, 1, ) 2 (0, 1, 2, ) 3 (0, 1, 2, 3, ) 4 (0, 1, ) 5 (0, 1, 2, 3, 4, 5, ) 6 (0, 1, 2, ) 7 (0, 1, 2, 3, 4, 5, )
00021081 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021082 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
```

```
[nukazuka@sphnx05 17:13:33 libraries] $ intt_runs_felix event_base beam
00000001 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00000012 : 0 ( ) 1 ( ) 2 ( ) 3 ( ) 4 (1, ) 5 ( ) 6 ( ) 7 ( )
00007420 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007421 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007422 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007423 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007424 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007425 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007426 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007427 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007428 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00007429 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
```

便利コマンド: intt_help

INTT 便利コマンドの説明を表示する

Usage: intt_runs_felix

```
[nukazuka@sphnx05 17:14:23 libraries] $ intt_help
HELP for INTT softwares

## Commands

### intt_help

This command

### intt_readme

A command to show README.md (or any text files in markdow style) nicely.
It's actually runs glow ( https://github.com/charmbracelet/glow ).
You can run it simply

    intt_readme README.md

(README.md above is a path to a text file to be shown).

### intt_runs

It shows a list of runs in SDCC.

Usage: intt_runs [file type] [run type]
[file type]: evt hit_base event_base merged_event_base DST
[run type]: beam calib calibration cosmics junk pedestal

So you will see, for example,

[nukazuka@sphnx05 01:28:52 bin] $ intt_runs evt cosmics
/sphenix/lustre01/sphnxpro/commissioning/INTT/cosmics
00021052
00021053
00021076
00021077

### intt_runs_felix

It shows a list of runs in SDCC for each FELIX server.

Usage: intt_runs_felix [file type] [run type]
[file type]: evt hit_base event_base merged_event_base DST
[run type]: beam calib calibration cosmics junk pedestal

So you will see, for example,

[nukazuka@sphnx05 19:54:16 bin] $ intt_runs_felix evt cosmics
00021052 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021053 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021076 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021077 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021078 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021079 : 0 (0, ) 1 (0, ) 2 (0, ) 3 (0, ) 4 (0, ) 5 (0, ) 6 (0, ) 7 (0, )
00021080 : 0 (0, 1, 2, 3, ) 1 (0, 1, ) 2 (0, 1, 2, ) 3 (0, 1, 2, 3, ) 4 (0, 1, ) 5 (0, 1, 2, 3, 4, 5, ) 6
(0, 1, 2, ) 7 (0, 1, 2, 3, 4, 5, )

## How to use

Run the setup script:

    source /sphenix/tg/tg01/commissioning/INTT/repositories/librares/intt_setup.sh

so PATH and LD_LIBRARY_PATH are set. It takes no argument.
If you write the command in your .bashrc, it's done automatically👍
```

便利コマンド: intt_readme

テキストファイルの中身をきれいに表示する

Usage: intt_readme [file name]

[file name]: The txt file name to be shown.

```
[nukazuka@sphnx05 17:15:33 INTT] $ pwd -P
/direct/sphenix+tg+tg01/commissioning/INTT
[nukazuka@sphnx05 17:15:35 INTT] $ ls
README.md  README.md~  commissioning_production  dst_files  evt_files  map_ladder  merged_root_files  repositories  root_files  show_README.sh  show_README.sh~  work
[nukazuka@sphnx05 17:15:37 INTT] $ intt_readme README.md
```

The working directory for INTT

Directories

Place for processing commissioning data

- commissioning_production

Data Storage

- evt_files : A directory for evt files, but actually, we use /sphenix/lustre01/sphnxpro/commissioning/INTT/ since data from the buffer box comes there.
- root_files : ROOT files (hit-base TTree, event-base TTree, not merged) are here.
- merged_root_files : Merged ROOT files for each run are here.
- dst_files : DST files are here (in the future).

Map

- map_ladder : Maps of ladder are here. They are copy of those in OPC0.

Working place for individuals

- work : Your place!

Software

- repositories : Common softwares should be put here. A setup shell script will be made to use them easily.

Contents in repositories directory

- INTT
- INTT_ExpertGUI
- INTT_Geo
- INTT_HV_GUI
- INTT_standalone_DAQ
- InttEventDisplay
- README.md
- librares : A prefix for installation.

Files

- README.md : This file
- show_README.sh : This script shows this README nicely.

例

```
/sphenix/tg/tg01/commissioning/INTT/
README.md
```

各ディレクトリには README ファイルを置いて、説明を書くべき。cat コマンドだと見にくいので、このコマンドを作ってみた。

意見・要望受付中。

自分で作った便利コマンドを共有してもらうのも大歓迎。