OpenH264 1.7.0 release note

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1).Over all release note for V1.7.0

API change:
- Set IDR frame independently for simulcast AVC
- VUI support
- LTR request independently for each layer
- Add get option profile/level info in decoder side, change profile/level setting
- Add option to get decoder statistic info
- Change NalLenInByte from array to dynamic buffer
- Change ENCODER_OPTION_ENABLE_SPS_PPS_ID_ADDITION to ENCODER_OPTION_SPS_PPS_ID_STRATEGY

New feature
- CHP support on encoder side
- VUI get/set option
- Set IDR frame independently for simulcast AVC;
- LTR request independently for each layer;
- AVX2, SSSE3 in motion compensation etc.
- Use pthread_condition instead of semaphores on apple platform

Bug fixes
- Bug fixes for parse-only crash issue,
- Bug fixes for load balancing logic and sample buffer init/uninit issue;
- Bug fixes for multithread pool module,
- Bug fixes for scc complexity/picture mapping/CABAC/4:0:0 format support
- Bug fixes for data overflow/ASM
- Bug fixes for ForceIntraFrame() which force IDR even flag equal to false
- Bug fixes for x86 text relocation issue #2263 #2534

RC enhancement
- Refactoring for IDR RC,
- Update default value and output qp info in rc_mode =2
- Turn off aq and don't use default max/min qp in RC_QUALITY_MODE

Enhance statistic log
- Interval timer for decoder statistic log update/output etc.

Build option
- New version update mechanism, 3 version number, Major.Minor.patch like 1.7.0
- AVX2 disable/enable support HAVE_AVX2 = Yes
- Cygwin x86_64 support
- Fixed mingw/msys2 build setting
- Add enable Pic option: ENABLEPIC = Yes

Remove unneeded code
UT enhance

2). Release note for github

API change:

- Force IDR frame independently for simulcast AVC
- LTR request independently for each layer
- VUI support, VUI get/set option on encoder side
- Add get option for profile/level info in decoder side, change profile/level setting
- Change NalLenInByte from array to dynamic buffer in TagParserBsInfo
- API change for get and set option both in encoder and decoder

New feature

- CHP support on encoder side
- Nal delimiter
- AVX2, SSSE3 in motion compensation etc.
- Change signal type for apple platform

Bug fixes

- Bug fixes for parse-only crash issue,
- Bug fixes for load balancing logic and sample buffer init/uninit issue;
- Bug fixes for multithread pool module,
- Bug fixes for scc complexity/picture mapping/CABAC/4:0:0 format support
- Bug fixes for data overflow/ASM
- Bug fixes for ForceIntraFrame() which force IDR even flag equal to false
- Bug fixes for x86 text relocation issue #2263 #2534

RC enhancement

- Refactoring for IDR RC, change default QP for RC_BUFFERBASED_MODE
- Turn off aq and don't use default max/min qp in RC_QUALITY_MODE

Enhance statistic log

- Interval timer for decoder statistic log update/output etc.

Build option

- New version update mechanism, 3 version number, Major.Minor.patch like 1.7.0
- AVX2/Pic build option support
- Cygwin x86_64 support, and fixed mingw/msys2 build setting

remove unneeded code and fixed/enhance ut cases

2. Release package

1).Release and test by openh264 pipeline

    http://10.140.198.27:8080/view/Pipeline/job/Pipeline-Release-Public/20/

2).Code signed

    release package has been signed by
    James Wu (chenyuwu) chenyuwu@cisco.com

3).Release package for Cisco CDN

    Code signed package has been uploaded to wme-jenkins
    https://wme-jenkins.cisco.com:8443/job/Openh264-Public-Release-Get-Package/10/

    which will be upload to cisco CDN by
    Hank Peng (hankpeng) hankpeng@cisco.com

3. Command for all commit Info since v1.6.0

1). All commit for v1.7.0 since v1.6.0

```
please refer to Appendix I or you can generate via below command.
```

2). How to get all commit

- Command:
  ```
  git log --since="$Date" --pretty=oneline >$LogFile
  ```
- Since date:
  ```
  V1.6.0, before 2016-07-03
  ```

3). Command for getting all commit ID since v1.6.0
```
git log --since="$2016-07-05" --pretty=oneline
```

4). Command for showing code change

For how to get code change info for given commit ID, refer to below command:
git diff CommitID^! Or git show CommitID

Example:
get diff info for commit ID 40d9930b9095fe2635d35b3cf6a8c59ee23de6ad
git diff 40d9930b9095fe2635d35b3cf6a8c59ee23de6ad^!

For detail category, please refer to **Appendix I**

4. Category for commit info since v1.6.0

1).Make/build option change

Summary of MakeFile/.mk files' change:

- New version update mechanism, 3 version number, Major.Minor.patch like 1.7.0
- AVX2 disable/enable support HAVE_AVX2 = Yes
- Cygwin x86_64 support
- Fixed mingw/msys2 build setting
- Add enable Pic option: ENABLEPIC = Yes

```
#*****************************************************************
```
command for getting all .mk and MakeFile change commit ID:
```
find ./ -name *.mk | xargs git log --since="2016-07-03"
                --pretty=oneline
```

result:
```
3223ba28c9a98dd10c4b4a15cfa100fefeb9cf05 update version to 1.7.0
47aedcf80821507029adf3adbd809aa8ee55f3b0 Merge pull request #2647 from
moriyoshi/moriyoshi/cygwin-x86_64-support
6b95de56666d5f48535ff8eb6b22ff1dccbdb98f add enable PIC option on Makefile
121859ef651ca7f1e445b3a7065cd04d715c7e94 Cygwin x86_64 support.
110f7c5bc42c47602fe8ac525267254314c3aa2a Include -lpthread -lm in the pkg-config
file when used as static library
5d335504fa9966abb0ef5a984a2c15f5a3d23c10 Don't add -lpthread to LDFLAGS on
Darwin, it's unnecessary there
ddda24047c978887fd1850c9a43dec69afe6c928 Simplify getting the iOS SDK path
f8c1a443ffff3b5ad579b193a18e32dc3ffc5a5b Fix building with MSVC after
f53869a9c09bfb71d54f6274f8375ffe69aed4a8
bc5fa81066e329051e2d320be755fc145fe548f3  mingw and msys2 build fix
c5a37c08eea825565df5cfeab83b428c517b0e37 mingw and msys2 build fix
f53869a9c09bfb71d54f6274f8375ffe69aed4a8 add version info for dynamic lib
93bc546ee1ca298c7d65e35f0f4863a2b3408864 Consistently use Yes instead of true for
makefile variables
7d00e8bc42247ebbb3ae5bbd8e4274bf6f489290 add option for enable/disable AVX2
#*****************************************************************
```
MakeFile commit history:
```
git log --since="2016-07-03"  --pretty=oneline MakeFile

3223ba28c9a98dd10c4b4a15cfa100fefeb9cf05 update version to 1.7.0
a92b15354e8a7012a7afb9393e3e92436b45653d Properly set the version in openh264.pc
ca9056437ef89d7769ad3ec1acf2b992902f8291 fix git issue #2561
8cf746301d9a685c265233d07d96de8f9ecc5b05 Use consistent whitespace indentation in
Makefile
f53869a9c09bfb71d54f6274f8375ffe69aed4a8 add version info for dynamic lib
03add693866e95a5e9d59e22753a9179281ac5fb Update the SharedLibVersion to make the
compatibilty
af8240a4407385cb0059db808fb3fc762143e2f4 Update the release note and readme files
for version 1.6
#*****************************************************************
```

2). API change

Summary of API change:

1) Set IDR frame independently for simulcast AVC
2) VUI support
3) LTR request independently for each layer
4) Add get option for getting profile and level info in decoder side, chang profile/level setting
5) Add option to get decoder statistic info
6) Fixed parse-only length overflow crash issue and change NalLenInByte from array to dynamic buffer
7) Change ENCODER_OPTION_ENABLE_SPS_PPS_ID_ADDITION to ENCODER_OPTION_SPS_PPS_ID_STRATEGY

```
#****************************************************************
```
 Detail change for API change:
```
#****************************************************************
```

➕ Set IDR frame independently for simulcast AVC
```
- virtual int EXTAPI ForceIntraFrame (bool bIDR) = 0;
+ virtual int EXTAPI ForceIntraFrame (bool bIDR,int iLayerId = -1) = 0;
```

➕ VUI support

codec/api/svc/codec_app_def.h

```
typedef enum {

+  DECODER_OPTION_GET_SAR_INFO,            ///< feedback decoder Sample Aspect
Ratio info in Vui

 } DECODER_OPTION;


+/**
+* @brief Structure for sample aspect ratio (SAR) info in VUI
+*/
+typedef struct TagVuiSarInfo {
+  unsigned int uiSarWidth;                    ///< SAR width
+  unsigned int uiSarHeight;                   ///< SAR height
+  bool bOverscanAppropriateFlag;              ///< SAR overscan flag
+} SVuiSarInfo, *PVuiSarInfo;
+

+* @brief Enumerate the type of sample aspect ratio
+*/
+typedef enum {
+  ASP_UNSPECIFIED = 0,
+  ASP_1x1 = 1,
+  ASP_12x11 = 2,
+  ASP_10x11 = 3,
+  ASP_16x11 = 4,
+  ASP_40x33 = 5,
+  ASP_24x11 = 6,
+  ASP_20x11 = 7,
+  ASP_32x11 = 8,
+  ASP_80x33 = 9,
+  ASP_18x11 = 10,
+  ASP_15x11 = 11,
+  ASP_64x33 = 12,
+  ASP_160x99 = 13,
+  ASP_EXT_SAR = 255
```

```
+} ESampleAspectRatio;

 * @brief  Structure for spatial layer configuration
 */
 typedef struct {

     //
+
+  bool bAspectRatioPresent; ///< aspect ratio present in VUI
+  ESampleAspectRatio eAspectRatio; ///< aspect ratio idc
+  unsigned short sAspectRatioExtWidth; ///< use if aspect ratio idc == 255
+  unsigned short sAspectRatioExtHeight; ///< use if aspect ratio idc == 255
+
 } SSpatialLayerConfig;
```

LTR request independently for each layer

```
@@ -235,6 +235,7 @@ typedef struct {
    unsigned int uiIDRPicId;          ///< distinguish request from different
IDR
    int          iLastCorrectFrameNum;
    int          iCurrentFrameNum;    ///< specify current decoder frame_num.
+   int          iLayerId;            //specify the layer for recovery request
 } SLTRRecoverRequest;

 /**
@@ -244,6 +245,7 @@ typedef struct {
    unsigned int  uiFeedbackType; ///< mark failed or successful
    unsigned int  uiIDRPicId;     ///< distinguish request from different IDR
    int           iLTRFrameNum;   ///< specify current decoder frame_num
+   int           iLayerId;        //specify the layer for LTR marking
feedback
 } SLTRMarkingFeedback;
```

Add get option for getting profile and level info in decoder side, chang profile/level setting

```
@@ -162,7 +162,8 @@ typedef enum {

+  DECODER_OPTION_PROFILE,              ///< get current AU profile info,
only is used in GetOption
+  DECODER_OPTION_LEVEL                 ///< get current AU level info,only
is used in GetOption
 } DECODER_OPTION;

 * @brief Enumerate the type of level id
 */
 typedef enum {
-  LEVEL_UNKNOWN,
-  LEVEL_1_0,
-  LEVEL_1_B,
-  LEVEL_1_1,
-  LEVEL_1_2,
-  LEVEL_1_3,
-  LEVEL_2_0,
-  LEVEL_2_1,
-  LEVEL_2_2,
-  LEVEL_3_0,
-  LEVEL_3_1,
-  LEVEL_3_2,
-  LEVEL_4_0,
-  LEVEL_4_1,
-  LEVEL_4_2,
```

```
−   LEVEL_5_0,
−   LEVEL_5_1,
−   LEVEL_5_2
+   LEVEL_UNKNOWN = 0,
+   LEVEL_1_0 = 10,
+   LEVEL_1_B = 9,
+   LEVEL_1_1 = 11,
+   LEVEL_1_2 = 12,
+   LEVEL_1_3 = 13,
+   LEVEL_2_0 = 20,
+   LEVEL_2_1 = 21,
+   LEVEL_2_2 = 22,
+   LEVEL_3_0 = 30,
+   LEVEL_3_1 = 31,
+   LEVEL_3_2 = 32,
+   LEVEL_4_0 = 40,
+   LEVEL_4_1 = 41,
+   LEVEL_4_2 = 42,
+   LEVEL_5_0 = 50,
+   LEVEL_5_1 = 51,
+   LEVEL_5_2 = 52
  } ELevelIdc;
```

➕ Add option to get decoder statistic info

```
typedef enum {
GetOption
+   DECODER_OPTION_STATISTICS_LOG_INTERVAL,///< set log output interval
+
  } DECODER_OPTION;

  /**
typedef struct TagVideoDecoderStatistics {
+
+   unsigned int uiProfile;              ///< Profile idc in syntax
+   unsigned int uiLevel;                ///< level idc according to Annex A-1
+
+   int iCurrentActiveSpsId;                     ///< current active SPS id
+   int iCurrentActivePpsId;                     ///< current active PPS id
+
+   unsigned int iStatisticsLogInterval;             ///< frame interval
of statistics log
  } SDecoderStatistics; // in building, coming soon
```

➕ Fixed parse-only length overflow crash issue and change NalLenInByte from array to dynamic buffer

```
typedef struct TagDecoderCapability {
 */
 typedef struct TagParserBsInfo {
   int iNalNum;                     ///< total NAL number in current AU
−   int iNalLenInByte [MAX_NAL_UNITS_IN_LAYER];  ///< each nal length
+   int *pNalLenInByte;  ///< each nal length
  }
```

➕ Change ENCODER_OPTION_ENABLE_SPS_PPS_ID_ADDITION to ENCODER_OPTION_SPS_PPS_ID_STRATEGY

```
typedef enum {

−   ENCODER_OPTION_ENABLE_SPS_PPS_ID_ADDITION,
+   ENCODER_OPTION_SPS_PPS_ID_STRATEGY,
 }
```

```
#*****************************************************************
```
Command for get API change commit ID history

`git log --since="2016-07-03" --pretty=oneline codec/api/svc/*`

Result list as below:

```
#*******************************************************************
3223ba28c9a98dd10c4b4a15cfa100fefeb9cf05 update version to 1.7.0
e73e4b57af93441598c67506143fe08a9399fff1 change sps/pps strategy option name as
ENCODER_OPTION_SPS_PPS_ID_STRATEGY to avoid confusion
74c02a500ba9c0f3be6947f7bac4fe7233cbf846 Merge pull request #2657 from
huili2/parseonly_length_overflow_crashfix_final
17139510a354b3f5aec036b8d583d188cb04aa10 fix parseonly length overflow
fb48e98b8c7d2ca8df9695a2262d98019ca0dab4    add option to set decoder statistics
log interval    add variables into decoder statistics and add statistics log
283b5e8f5628f120b735199725ee9f9e7573d145 API update: support sample aspect ratio
in VUI
f09c85f45d52c91234482b97b34fe01dadd002c7 change profile and level setting and add
ut cases
ced6ca5fab2c7195755b2754ff218e46acea5b94 add getting profile and level info in
GetOption
8652028620269cb9f3415cc405c67e5af1492621    modify LTR interface and support LTR
request for each layer
4ebaba864c1e8b4ef399860857dc29ca1c121a9a add part of VUI parse in sps, and add
SAR option in GetOption()
61e668545ba0b3dae1fdf1e1d927a2e452125b40 Set IDR frame independently for
simulcast AVC
#*******************************************************************
```

3).CHP support on encoder side

```
b84f056cf2345ce447f9ab6d17c6289f083c0538 Merge pull request #2659 from sijchen/chp

8c88b934735a3d7668755b66b06b7305d03456c9 add support for bConstraintSet4Flag and
bConstraintSet5Flag
```

4).New option/feature
 VUI get/set option
 Set IDR frame independently for simulcast AVC; LTR request independently for each layer;
 Nal delimiter

```
#*****************************************************************
722f1d16d6361ef46d12a1eb39e3cefa4c5b15bd Merge pull request #2648 from
huili2/au_delimiter_as_first_nal_support
0fec22683f252edd582d05c6b7ade4562e9d56c3 Merge pull request #2630 from
huili2/sebsetsps_vui_bugfix
283b5e8f5628f120b735199725ee9f9e7573d145 API update: support sample aspect ratio
in VUI
4ebaba864c1e8b4ef399860857dc29ca1c121a9a add part of VUI parse in sps, and add
SAR option in GetOption()
696fb49afe200e5e86368fb1efdeda7876c5a351 Merge pull request #2572 from
sijchen/improve_dump_src2
#*****************************************************************
```

5).Codec optimization
 x86 asm, add AVX2, SSSE3 in motion compensation etc.

```
#*****************************************************************
b6af402b178c61fffeb4e6a52c42e559cde5b968 abs method change for speedup
1c532d6f748e6e22fe7860d19ce6fcd73693285c Merge pull request #2538 from
saamas/common-x86-mc-optimizations
cd9982ec4472664290d67a15fbc9cf53a97e1007 Merge pull request #2544 from ruil2/asm

b397b397502d940a22a0fda35f1d787336dbdaf2 [Common] Add AVX2 motion compensation
routines
2ecbc51c2b030f84c6832696b1d465bfded932b7 [Common] Add SSSE3 motion compensation
routines
80721234bef52905fe23d7e4acc87bae29f0639c [Common/x86] Tweak McCopyWidthEq8_mmx
a5b53a690fc9d10a3a454ef6f5ea6b9826874ec6 [Common/x86] Drop McCopyWidthEq4_mmx
#*****************************************************************
```

6).Bug fixes

summary of bugfixed:

bug fixes for parse-only crash issue,
bug fixes for load balancing logic and sample buffer init/uninit issue;
bug fixes for multithread pool module,
bug fixes for scc complexity/picture mapping/CABAC/4:0:0 format support
bug fixes for data overflow/ASM
bug fixes for ForceIntraFrame() which force IDR even flag equal to false
buf fixes for x86 text reallocate issue #2234 #2263

loadbalancing bug fixes

```
9955f28c7dd64a46813bf502dda796897e6a9cdd refine loadbalancing logic
```

parse-only bug fixes

```
74c02a500ba9c0f3be6947f7bac4fe7233cbf846 Merge pull request #2657 from
huili2/parseonly_length_overflow_crashfix_final
17139510a354b3f5aec036b8d583d188cb04aa10 fix parseonly length overflow
```

Memory bug fixes

```
1b11d831ad145a2a5aad9cf7f4182d83e81d4d42 set null when buffer is released
3c2caa4a52fdbc480ae9c41cd1081bd6627822aa Merge pull request #2641 from
ruil2/memory
518a317201d6bea5e5f61669d154e059f662a60c fix memory lenght issue
```

Init

```
9d89a6976ebbefb84fd8cbfccf4ed062779cda05 init samplebuffer
```

Multi-thread

```
8bf907ea042263b4839d9437f8587db2078c29eb fixed bug--multi-thread log format
```

Dump file

```
37e67eb5426825d0c7505968ee014e2b1f86b9ee fix dump file issue that removing
redundant operation
```

API/forceIDR/setoption

```
9f0f8b0a684b1f9ed6c42b31abd6b63faa548869 add log info if bIDR set to false
when calling ForceIntraFrame()
75f242d49ab0f5da5f118a5aebc403f1eef74a9a make BaseOption set align with
extOption
```

ASM

```
0fd900be473e035dd16a490e83fd359c78b7d4e8 fix build issue when disable AVX2
assembly
```

Data overflow

```
6ab98df92e883288228e28807fecefe4cbd3001e Merge pull request #2620 from
ruil2/overflow (RC WELS_DIV_ROUND64 to WELS_DIV_ROUND())
```

CABAC

```
1d4816658c35b0e9548e8e589364022f23d7a720 fix issues with dynamic slice mode
and cabac
f421aab6a3bc615d3d1d3e496aeccde7b947f86b Merge pull request #2625 from
ruil2/cabac_change
```

SCC complexity

4e984ba31417a70270ec59b2732d8d5b0df7d8f6 use correct complexity for screen content mode

- X86 text reallocate issue
  783e6fbd124f0d5ef4f993c24ab67abd80706cdb avoid text-rel on x86-32bits

- Picture mapping
  036c8b2aab8ae40feb7263f04cec3ae13ad0e3db fix source picture error mapping issue

- fix the 4:0:0 support bug

  687f9eff1b7c2f9b4cfbea7de44f52f8c8155312 (1) remove the weighted prediction sytax limit (2) fix the 4:0:0 support bug

7).RC

```
be6f6f633020d5445c36e23362a81c32fe32484f      refactor IDR frame rc  control
d0719d5802526f677e8a0c9130093b55d1c542ff Merge pull request #2616 from ruil2/rc_idr
6b5ac21dec76b86329eb61de41756e86d72eb320 Merge pull request #2615 from ruil2/info_update
1a6c396330c3d7162470ed42b3850ff5e97e8f89 update default value and output qp info in
rc_mode =2
69a6c273a0c79ef153fa43423de68efccd697095 turn off aq and don't use default max/min qp in
RC_QUALITY_MODE
```

8).MT

```
3d532fff80597d355cb9939623447ed709425bed ListQueueFoeMT&AddReturnCheck
3d25c25aeafcf7c186ff449201ef7c061db00192 Merge pull request #2554 from ruil2/thread3
c12b88ae43a3a6c2293555b5abaeb9d60904b7f9      use pthread_condition instead of semaphores
on apple platform
```

9).Code refactoring

```
c06f9ec41e26c9e86314c3207d0dcbd3d5594ceb [Common/x86] Convert McCopyWidthEq8_sse2 back
to MMX
3dff262fe7c9b260d9cb3fd20e10cb9ab32625ca      set complexity mode
```

10).Enhance statistic log

```
fb48e98b8c7d2ca8df9695a2262d98019ca0dab4    add option to set decoder statistics log
interval    add variables into decoder statistics and add statistics log
af774e4a52c5bce1f66018990b3f4e67bc7a1937 add protection and remove redundant param
c7bffb66735df8ea01e268bc906695ee04f007ae Merge pull request #2623 from ruil2/lrt1
```

11).Remove unneeded code

```
8386ac8e37d92a2fa00ae8b18595462babab5a61 remove unneeded lines
2dc76d74250d90dacd4f3ca0e1ec5348012db4ca    remove unusage code for cabac
3c2b160fe55efa6d8db4d9fd839cbc7b8fe2bf2e remove sps late than pps logic for scaling_list
d5e304fd9f90039b80b31dba32d5bc0b42f793de remove duplipate eErrorConMethod in decContext
compared with pParam"
```

12).UT enhance

```
be060e21f1d7cbdb25e7897e87485162c655fa14 fix the filling of testing data
d52aadf290fc5c05ee911c52a8608ca20f35c2a8 Fix build warnings on MSVC
8a3daad196b4845778856513cc4ba1daabe76f3a don't use random input for max resolution
6ba85394e0adfaaa506da900bc93e449e436fb26 Merge pull request #2589 from ruil2/reset_code
163fe6fe242bc84faae7d92f4d8a4ba486e17b17 Merge pull request #2579 from
huili2/ubsan_warning_videotype
e103ecea7fec1f3b47b1568c8976382df43b0b32 fix warning of video_bitstream_type in UT
a30f8fe33d92e9c029659a6f702eb8c4e9f9feb8 add SCC and SVC mulitilayer cases for encoder
biniary comparison test
27599fbaae8158f8996d5e8e8887ba2334efdd14 fix macro missing build issue for avx2 in UT
997f0ed69b811697611fceb2d12ca8cfe423521a Merge pull request #2557 from
sijchen/shorten_ut
84d6ed0b78bd38999edb032eb2a1e7d78f1b2f59 Merge pull request #2558 from
huili2/remove_log_many_idr_noEC
62b4f5dfdefa2e1bfb962c2d9bbfb3ee9bc16ab8 remove unneed script, MD5 check and simplified
the case check logic
f22c47ca5dcb2bcd815c63b1b3b595c5665348d4 Merge pull request #2550 from
sijchen/add_size_test2
9b0a9428b410ae2f6dfff88238f1bf3deb149595 [UT] Test for out-of-bound stores in MC halfpel
tests
```

13).README update

```
3e4c6382451ffa5a835d7464dfa58464a6e5e9fb Merge pull request #2581 from
rwhitworth/documentation
```

Appendix I: Commit info since v1.6.0

```
0ea4767c676603c4ab72d4f17e0daa55ed083597 Merge pull request #2673 from
ruil2/openh264v1.7
40d9930b9095fe2635d35b3cf6a8c59ee23de6ad Merge pull request #2674 from
GuangweiWang/public-release-update-version1.7.0
9955f28c7dd64a46813bf502dda796897e6a9cdd refine loadbalancing logic
3223ba28c9a98dd10c4b4a15cfa100fefeb9cf05 update version to 1.7.0
6900cb09a5acfcd129c3e1b970113f67d80b36f5 Merge pull request #2670 from
ruil2/openh264v1.7
e73e4b57af93441598c67506143fe08a9399fff1 change sps/pps strategy option name as
ENCODER_OPTION_SPS_PPS_ID_STRATEGY to avoid confusion
74c02a500ba9c0f3be6947f7bac4fe7233cbf846 Merge pull request #2657 from
huili2/parseonly_length_overflow_crashfix_final
17139510a354b3f5aec036b8d583d188cb04aa10 fix parseonly length overflow
b84f056cf2345ce447f9ab6d17c6289f083c0538 Merge pull request #2659 from sijchen/chp
8c88b934735a3d7668755b66b06b7305d03456c9 add support for bConstraintSet4Flag and
bConstraintSet5Flag
082449eaceb7dfcee787c7fd00b6459b8cb35492 Merge pull request #2656 from sijchen/dec_stat3
af774e4a52c5bce1f66018990b3f4e67bc7a1937 add protection and remove redundant param
2ca99122d4e561fd3890fdbe28063c2f318b4fd9 Merge pull request #2653 from sijchen/test_ut
8386ac8e37d92a2fa00ae8b18595462babab5a61 remove unneeded lines
fb48e98b8c7d2ca8df9695a2262d98019ca0dab4      add option to set decoder statistics log
interval      add variables into decoder statistics and add statistics log
be060e21f1d7cbdb25e7897e87485162c655fa14 fix the filling of testing data
47aedcf80821507029adf3adbd809aa8ee55f3b0 Merge pull request #2647 from
moriyoshi/moriyoshi/cygwin-x86_64-support
2c6185a22d5a2b53c1ee002aa1db2a2ed2af311b Merge pull request #2649 from
huili2/parseonly_crash_addlog
722f1d16d6361ef46d12a1eb39e3cefa4c5b15bd Merge pull request #2648 from
huili2/au_delimiter_as_first_nal_support
d59610965f421c872ea4752940cb04aa063b1b64 Merge pull request #2650 from GuangweiWang/add-
pic-option
81773221a58b31bd657b20c1e1b93dba68fa928f add log for further digging on parser crash
c281ddab1cf2e13dffe1255a61076376e7e32de0 support au_delimiter as first NAL in seq
6b95de56666d5f48535ff8eb6b22ff1dccbdb98f add enable PIC option on Makefile
121859ef651ca7f1e445b3a7065cd04d715c7e94 Cygwin x86_64 support.
e1a27c9ac1f2f44056c65f5ebc590a2cc8385d5d Merge pull request #2644 from
huili2/parseonly_add_protection
10bc74b35cb16328c8a62a4e58a2a8c6f6cb1ff3 Merge pull request #2643 from
huili2/remove_spslate_logic_for_scaling_list
3c2b160fe55efa6d8db4d9fd839cbc7b8fe2bf2e remove sps late than pps logic for scaling_list
4c74cc8fdeba12f8556528aca6f12352331cab67 make error consistence for memory fail
3c2caa4a52fdbc480ae9c41cd1081bd6627822aa Merge pull request #2641 from ruil2/memory
b555404fe1652d7a22a896bb6ccb91988aae2502 Merge pull request #2636 from
ycqian/Abs_method_speedup
fd3fde62d9c97dd1aa204d26f427b18184cc2b9e Merge pull request #2639 from ruil2/return
94b55520b8fd861b80e0e36ac82a553361fffdcf use the correct return value when memory can't
be allocated.
0fec22683f252edd582d05c6b7ade4562e9d56c3 Merge pull request #2630 from
huili2/sebsetsps_vui_bugfix
dcd3618bfc70fe6b409a46fc729d5b5161e02b9d Merge pull request #2638 from ruil2/memory
3589351ed762d12ee56cb222b3dab5c163d10768      change return value to match the actual
status
1b11d831ad145a2a5aad9cf7f4182d83e81d4d42 set null when buffer is released
c5a09faf24190d66fbc9d97f6374dbb4dc203b4c fix subsetsps parse and scalinglist bug fix
1a9aa4c762288fd94590d4a1e1e998332d66ed75 Merge pull request #2633 from mstorsjo/pc-fix
110f7c5bc42c47602fe8ac525267254314c3aa2a Include -lpthread -lm in the pkg-config file
when used as static library
5d335504fa9966abb0ef5a984a2c15f5a3d23c10 Don't add -lpthread to LDFLAGS on Darwin, it's
unnecessary there
a92b15354e8a7012a7afb9393e3e92436b45653d Properly set the version in openh264.pc
afcb00e073a679351a1bf02bc49b0f14104865dc Merge pull request #2631 from aleniuk/master
283b5e8f5628f120b735199725ee9f9e7573d145 API update: support sample aspect ratio in VUI
d49554b234b6ad10e0655c84d307ac1ba470e6f4 Merge pull request #2628 from ruil2/profile2
f09c85f45d52c91234482b97b34fe01dadd002c7 change profile and level setting and add ut
cases
```

```
a683dae3e94a1b3ca798c94f7fbb6aaf481342ad Merge pull request #2627 from ruil2/dec_profile
dea22e8a9ac03a7e4058f8c3c1d5f0c4f0af2e21 Merge pull request #2626 from
huili2/SetOptionEncBaseImprove
ced6ca5fab2c7195755b2754ff218e46acea5b94 add getting profile and level info in GetOption
f421aab6a3bc615d3d1d3e496aeccde7b947f86b Merge pull request #2625 from
ruil2/cabac_change
2dc76d74250d90dacd4f3ca0e1ec5348012db4ca     remove unusage code for cabac
b6af402b178c61fffeb4e6a52c42e559cde5b968 abs method change for speedup
c7bffb66735df8ea01e268bc906695ee04f007ae Merge pull request #2623 from ruil2/lrt1
8652028620269cb9f3415cc405c67e5af1492621     modify LTR interface and support LTR
request for each layer
736128e4e372bc026019b6a1169619ca6cc97a7b Merge pull request #2621 from
ruil2/screen_complexity
4e984ba31417a70270ec59b2732d8d5b0df7d8f6 use correct complexity for screen content mode
6ab98df92e883288228e28807fecefe4cbd3001e Merge pull request #2620 from ruil2/overflow
f4fed852dfb2cf4928c8dd78512b48ee5feea0b2 modify data type to avoid overflow
d0719d5802526f677e8a0c9130093b55d1c542ff Merge pull request #2616 from ruil2/rc_idr
6b5ac21dec76b86329eb61de41756e86d72eb320 Merge pull request #2615 from ruil2/info_update
be6f6f633020d5445c36e23362a81c32fe32484f     refactor IDR frame rc  control
75f242d49ab0f5da5f118a5aebc403f1eef74a9a make BaseOption set align with extOption
1a6c396330c3d7162470ed42b3850ff5e97e8f89 update default value and output qp info in
rc_mode =2
05d13b4a996d7987c7028baf47dc23b9c7d884b7 Merge pull request #2614 from ruil2/setoption
c01ed5ba8e23d3fe6a701ff4ed90339758f846a8     make
SetOption():ENCODER_OPTION_SVC_ENCODE_PARAM_BASE work correclty
fea27cab7b93fa0f806ede551a5838f470ca1ed0 Merge pull request #2613 from
ruil2/memory_issue
518a317201d6bea5e5f61669d154e059f662a60c fix memory lenght issue
c1f66ea21ba869a4dcf901ad6edfbbaa8cca2618 Merge pull request #2611 from GuangweiWang/fix-
textrel
783e6fbd124f0d5ef4f993c24ab67abd80706cdb avoid text-rel on x86-32bits
bc42fa186153ddba65c398eb0d0aea0b6eea7da3 Merge pull request #2609 from
huili2/remove_duplicate_ECmethod_in_DecContext
d5e304fd9f90039b80b31dba32d5bc0b42f793de remove duplipate eErrorConMethod in decContext
compared with pParam"
3de2103d69d2d833c0a311cb318723745c8fd8c9 Merge pull request #2606 from
ruil2/dynamic_slice
072fe4398c6481b4aae69f2b80dcda571299d930 Merge pull request #2608 from ruil2/src_error
036c8b2aab8ae40feb7263f04cec3ae13ad0e3db fix source picture error mapping issue
1d4816658c35b0e9548e8e589364022f23d7a720 fix issues with dynamic slice mode and cabac
61b9ddce8e2e8437babffe6e838b2acc873dc994 Merge pull request #2604 from
huili2/parse_ubsan_32shift
05a95e0ecc08ed39cf5de728f5a8a2d3c72594a3 Merge pull request #2603 from mstorsjo/fix-
msvc-warning
d52aadf290fc5c05ee911c52a8608ca20f35c2a8 Fix build warnings on MSVC
336416875301fa3dd19abbf6b56f695ea1864b82 fix ubsan warning on 32bit shift using twice
16bit calling
6d9220c43b74272fab1759a328a27d54f720fafb Merge pull request #2599 from
huili2/vui_parse_part
4ebaba864c1e8b4ef399860857dc29ca1c121a9a add part of VUI parse in sps, and add SAR
option in GetOption()
bc0fc2e709bc8bb50d3a354eaadd41fbba2a0bda Merge pull request #2594 from
huili2/parseonly_mem_bugfix
f84c1c28c825ff1c9aa1d06fc116900d0bca961e Merge pull request #2593 from ruil2/aq
e6a6b09dba1a008fbb17b01bbb9d48e74deb29cb fix parseonly issues when bs is very large
69a6c273a0c79ef153fa43423de68efccd697095 turn off aq and don't use default max/min qp in
RC_QUALITY_MODE
5b5134eaeabb6620c68310a78cadcb7a8d473bce Merge pull request #2590 from
GuangweiWang/issue-2561
6ba85394e0adfaaa506da900bc93e449e436fb26 Merge pull request #2589 from ruil2/reset_code
8a3daad196b4845778856513cc4ba1daabe76f3a don't use random input for max resolution
a6f60e9ac7221b9c291a7b31d5c0b38f7b081e32 change log type to avoid too many logs
0c82b4b46f6d5ab92515f555fbe33ad5e62f3f10 Merge pull request #2588 from
shihuade/BugFixed_V1
9f0f8b0a684b1f9ed6c42b31abd6b63faa548869 add log info if bIDR set to false when calling
ForceIntraFrame()
d76d62d3856e790515edd2d2399d8ce950ab835e API update--do nothing if bIDR set to false
when calling ForceIntraFrame()
8bf907ea042263b4839d9437f8587db2078c29eb fixed bug--multi-thread log format
```

163fe6fe242bc84faae7d92f4d8a4ba486e17b17 Merge pull request #2579 from huili2/ubsan_warning_videotype
3e4c6382451ffa5a835d7464dfa58464a6e5e9fb Merge pull request #2581 from rwhitworth/documentation
284861b3bcb9f977cc5d47b9eaf0d77b73375d9a Merge pull request #2580 from mstorsjo/ios-sdk
7a9f15cb8a1371556242aa2de79d09ae42c57675 Merge pull request #2584 from ruil2/forceidr
696fb49afe200e5e86368fb1efdeda7876c5a351 Merge pull request #2572 from sijchen/improve_dump_src2
61e668545ba0b3dae1fdf1e1d927a2e452125b40 Set IDR frame independently for simulcast AVC
ca9056437ef89d7769ad3ec1acf2b992902f8291 fix git issue #2561
529bcf83cc23b9927cfc4ffe97a8c45317ba2d17 README.md updates
ddda24047c978887fd1850c9a43dec69afe6c928 Simplify getting the iOS SDK path
e103ecea7fec1f3b47b1568c8976382df43b0b32 fix warning of video_bitstream_type in UT
28db1bce906577c6e70d4b801a96882a33452462 Merge pull request #2569 from shihuade/UpdateTravis_V1.1
a30f8fe33d92e9c029659a6f702eb8c4e9f9feb8 add SCC and SVC mulitilayer cases for encoder biniary comparison test
0fd88df93c5dcaf858c57eb7892bd27763f0f0ac Merge pull request #2570 from mstorsjo/fix-msvc
66b2b15529f7c351fd04fc6f1a4bb05c22eba238 Merge pull request #2571 from mstorsjo/fix-whitespace
3e3793b6292e877e4be80a021a8242f0262a0102   improve the src dump function and remove duplicated calls
8cf746301d9a685c265233d07d96de8f9ecc5b05 Use consistent whitespace indentation in Makefile
f8c1a443ffff3b5ad579b193a18e32dc3ffc5a5b Fix building with MSVC after f53869a9c09bfb71d54f6274f8375ffe69aed4a8
f911895dbbbcaab72749d281e7a865151e8a7e46 Merge pull request #2565 from ycqian/fixListQueue
d52c64a2a56ce6de6055d8908b0b9d8f4c3018cc Merge pull request #2562 from huili2/fix_avx2_ut_build
c6187522569d863ec260c19eb75e5842debb73d0 Merge pull request #2566 from BilyakA/fix-mingw-nt-build
bc5fa81066e329051e2d320be755fc145fe548f3 mingw and msys2 build fix
c5a37c08eea825565df5cfeab83b428c517b0e37 mingw and msys2 build fix
3d532fff80597d355cb9939623447ed709425bed ListQueueFoeMT&AddReturnCheck
33cb4a6df04b0d24c1ab20a260d358c737c1577e Merge pull request #2564 from GuangweiWang/tspace
f53869a9c09bfb71d54f6274f8375ffe69aed4a8 add version info for dynamic lib
5a966b97b1d97f9f5e787462a71aedbd7aadc00c Merge pull request #2556 from shihuade/MacTest_V2.0
27599fbaae8158f8996d5e8e8887ba2334efdd14 fix macro missing build issue for avx2 in UT
84d6ed0b78bd38999edb032eb2a1e7d78f1b2f59 Merge pull request #2558 from huili2/remove_log_many_idr_noEC
997f0ed69b811697611fceb2d12ca8cfe423521a Merge pull request #2557 from sijchen/shorten_ut
83b5c3c2e547a5048cdff49dc5eb42b1b5618763 short the UTs that costed too much time
0cb2c2d3b06e70a83efe85bd2d80a0257e1dfc9b remove too many log for IDR loss under EC is off
62b4f5dfdefa2e1bfb962c2d9bbfb3ee9bc16ab8 remove unneed script, MD5 check and simplified the case check logic
f22c47ca5dcb2bcd815c63b1b3b595c5665348d4 Merge pull request #2550 from sijchen/add_size_test2
3d25c25aeafcf7c186ff449201ef7c061db00192 Merge pull request #2554 from ruil2/thread3
c12b88ae43a3a6c2293555b5abaeb9d60904b7f9   use pthread_condition instead of semaphores on apple platform
af0427d0651b9c92122d5da864de7e9b23dcdda1 add more special resolution and slice-mode tests
30328b85f2f4bb89d71e38b15148859a3fad14a6 Merge pull request #2536 from mstorsjo/make-consistency
1c532d6f748e6e22fe7860d19ce6fcd73693285c Merge pull request #2538 from saamas/common-x86-mc-optimizations
cd9982ec4472664290d67a15fbc9cf53a97e1007 Merge pull request #2544 from ruil2/asm
e88bb8886af9b10261b4febc21214b32c75b710b Merge pull request #2542 from ruil2/dump1
50a9389f0bacc7c7ee7c806302ac153d01b3ba5b Merge pull request #2543 from ruil2/complexity1
945fc0e03ee855bd60e6b5628879b2ad48bb8162 astyle files
0fd900be473e035dd16a490e83fd359c78b7d4e8 fix build issue when disable AVX2 assembly
37e67eb5426825d0c7505968ee014e2b1f86b9ee   fix dump file issue that removing redundant operation
c06f9ec41e26c9e86314c3207d0dcbd3d5594ceb [Common/x86] Convert McCopyWidthEq8_sse2 back to MMX

8fcef67c70e37e3cb207a26e374a79334eda8bf7 Merge pull request #2539 from
HaiboZhu/Update_binary_files_location_v1.6.0
241700cb96256fda2e86b00be54cc027a8eac8ab Merge pull request #2537 from mstorsjo/msvc-
warning-fix
0f21b2b02e5b10707b4c271885b81437306876ac Merge pull request #2535 from mstorsjo/silence-
warnings
9b6476e98a4ea9226ce2cfd7e8ba83a2dbe28d69 Update the binary files location for release
v1.6.0
b397b397502d940a22a0fda35f1d787336dbdaf2 [Common] Add AVX2 motion compensation routines
2ecbc51c2b030f84c6832696b1d465bfded932b7 [Common] Add SSSE3 motion compensation routines
80721234bef52905fe23d7e4acc87bae29f0639c [Common/x86] Tweak McCopyWidthEq8_mmx
a5b53a690fc9d10a3a454ef6f5ea6b9826874ec6 [Common/x86] Drop McCopyWidthEq4_mmx
9b0a9428b410ae2f6dfff88238f1bf3deb149595 [UT] Test for out-of-bound stores in MC halfpel
tests
350cafd69a3c2d79946a5ed86ee8c871c7714465 Silence warnings about conversions in MSVC
93bc546ee1ca298c7d65e35f0f4863a2b3408864 Consistently use Yes instead of true for
makefile variables
91331e1ba451ae3b7628d075b6ac8d7075e36e57 Silence warnings with GCC 5.4
1f770c488cfd5400e6e0092a3e49aef841f6c5de Merge pull request #2531 from
GuangweiWang/enable-disable-AVX2
3dff262fe7c9b260d9cb3fd20e10cb9ab32625ca   set complexity mode
5a8f5e8cf12d7cf46d3c28a31299b646e7bf3282 Merge pull request #2520 from ruil2/rc1
7d00e8bc42247ebbb3ae5bbd8e4274bf6f489290 add option for enable/disable AVX2
8980731be0043b4855389397a64cbf694a8a14f9 Merge pull request #2527 from ruil2/init
a43841d0e94f3b18c440f55d91d8a1942cf86cfe Merge pull request #2526 from
HaiboZhu/Bugfix_CHP_support
9d89a6976ebbefb84fd8cbfccf4ed062779cda05 init samplebuffer
687f9eff1b7c2f9b4cfbea7de44f52f8c8155312 (1) remove the weighted prediction sytax limit
(2) fix the 4:0:0 support bug
d97f4c5b680bb90bf476c648b3e0a0bb480be0f2 Merge pull request #2524 from
HaiboZhu/Change_SharedLibVersion
03add693866e95a5e9d59e22753a9179281ac5fb Update the SharedLibVersion to make the
compatibilty
ffe11835fcb118618f3efd171994775aa952a5c3 change FrameQP control and complexity
calculation
44d8560698ce6e22c315c500ac00451fd276607e Merge pull request #2519 from
HaiboZhu/Update_ReadMe_for_master
3a6ed92a351a5117d3e415bc39e7bd08f6ed6f79 Update the wrong description in README.md
842b4f0243f94220b321fab75ffbeee93b4f5a45 Merge pull request #2516 from
HaiboZhu/Add_release_binary_files_v1.6.0
d5a8c84409a1e870829655b04fe1de2b90fc4b2f Update the binary files location for openh264
release 1.6.0
4e3df2619af9044c89e6e48f2fca670f71476be8 Merge pull request #2512 from
HaiboZhu/Update_v1.6_information