1) In the controller can write Card, Password, CardRec, Holiday.

Card - this access card. And what CardRec? Title consonant with the Card, but the physical meaning is not clear.

A: after insert info to ACS, ACS will generate a unique id for this card, we call it CardRec.

2) When the recording card Used in number (as mifare), but using a series (both HID). The controller does not

works with maps HID?

A: we are not sure the meaning of HID or mifare, will u give us more details?

3) Adding a map. Need a detailed description of the meaning and value of transfers tagNET\_ACCESSCTLCARD\_STATE,

tagNET\_ACCESSCTLCARD\_TYPE

A: these translated struct in dhnetsdk.h may help u to understand:

// Card Statue

typedef enum tagNET\_ACCESSCTLCARD\_STATE

{

NET\_ACCESSCTLCARD\_STATE\_UNKNOWN = -1,

NET\_ACCESSCTLCARD\_STATE\_NORMAL = 0, // Normal

NET\_ACCESSCTLCARD\_STATE\_LOSE = 0x01, // Lose

NET\_ACCESSCTLCARD\_STATE\_LOGOFF = 0x02, // Logoff

NET\_ACCESSCTLCARD\_STATE\_FREEZE = 0x04, // Freeze

}NET\_ACCESSCTLCARD\_STATE;

// Card Type

typedef enum tagNET\_ACCESSCTLCARD\_TYPE

{

NET\_ACCESSCTLCARD\_TYPE\_UNKNOWN = -1,

NET\_ACCESSCTLCARD\_TYPE\_GENERAL, // General Card

NET\_ACCESSCTLCARD\_TYPE\_VIP, // VIP Card

NET\_ACCESSCTLCARD\_TYPE\_GUEST, // Guest Card

NET\_ACCESSCTLCARD\_TYPE\_PATROL, // Patrol Card

NET\_ACCESSCTLCARD\_TYPE\_BLACKLIST, // Blacklist Card

NET\_ACCESSCTLCARD\_TYPE\_CORCE, // Corce Card

NET\_ACCESSCTLCARD\_TYPE\_MOTHERCARD = 0xff, // Mother Card

}NET\_ACCESSCTLCARD\_TYPE;

4) Adding a map. Structure NET\_RECORDSET\_ACCESS\_CTL\_CARD

What is nUserTime?

A: nUserTime means Times of Use, the use time reduces 1 if the card is used every time. It is available only when card type is Guest Card. This guest card info will be erased after the nUserTime decreases to 0.

//Entrance Guard Record Information

typedef struct tagNET\_RECORDSET\_ACCESS\_CTL\_CARD

{

DWORD dwSize;

int nRecNo; // Record Number,Read-Only

NET\_TIME stuCreateTime; // Creat Time

char szCardNo[DH\_MAX\_CARDNO\_LEN]; // Card number

char szUserID[DH\_MAX\_USERID\_LEN]; // User's ID

NET\_ACCESSCTLCARD\_STATE emStatus; // Card Stetue

NET\_ACCESSCTLCARD\_TYPE emType; // Card Type

char szPsw[DH\_MAX\_CARDPWD\_LEN]; // Card Password

int nDoorNum; // Valid Door Number;

int sznDoors[DH\_MAX\_DOOR\_NUM]; // Privileged Door Number,That is CFG\_CMD\_ACCESS\_EVENT Configure Array Subscript

int nTimeSectionNum; // the Number of Effective Open Time

int sznTimeSectionNo[DH\_MAX\_TIMESECTION\_NUM]; // Open Time Segment Index,That is CFG\_ACCESS\_TIMESCHEDULE\_INFO Array subscript

int nUserTime; // Frequency of Use

NET\_TIME stuValidStartTime; // Valid Start Time

NET\_TIME stuValidEndTime; // Valid End Time

BOOL bIsValid; // Wether Valid,True =Valid,False=Invalid

}NET\_RECORDSET\_ACCESS\_CTL\_CARD;

5) SznDoors array filled with the values ​​1 and 2. What are these values? And if you do not specify 1 and 2, and 3 and 4?

A: 1、2 acorrding to first door, 3、4 acorrding to second door.

in NET\_RECORDSET\_ACCESS\_CTL\_CARD, sznDoors means the card with CardRec have authority to use these doors .

6) What is szUserID?

A: do not support, u may ignore it.

7) I add a CARD

Then I want to find all the cards using testRecordSetFindNext\_Card

The values of the structure are tagNET\_RECORDSET\_ACCESS\_CTL\_CARD

stuCreateTime all the zeros. Moment stuValidStartTime stuValidEndTime and the zeros

- Why all the cards at the request returns only the first ten

A: EntranceGuardDemo only describe a simple example. For more search, simple code could be below:

int nRetCount = 0

LLONG handle = startFind();

do

{

FindNext(handle, &nRetCount);

}while (nRetCount >= expected count)

stopFind(handle);

after get handle, you may do FindNext() several times in order to get more results, finally stopFind();

8) What are the arguments structure search card. Change of values ​​does not change the search results

A: if pQueryCondition in NET\_IN\_FIND\_RECORD\_PARAM is NULL, searchs all result.

Query condition differs frome search type of record.

AccessCtlCard ==> FIND\_RECORD\_ACCESSCTLCARD\_CONDITION

AccessCtlPwd ==> FIND\_RECORD\_ACCESSCTLPWD\_CONDITION

AccessCardRec ==> FIND\_RECORD\_ACCESSCTLCARDREC\_CONDITION

AccessHoliday ==> no query conditon, default to search all

9) What's the role of dwRecordMask in structure tagCFG\_TIME\_SECTION?

- I call void DevConfig\_AccessTimeSchedule(LLONG lLoginId)

- First bRet is true. But second is always false. Why CLIENT\_ParseData return false? I look at the szJsonBuf and stuInfo and it seems valid.

10) I call

void DevConfig\_AccessTimeSchedule(LLONG lLoginId)

what does "nChannel" stands for?

11) I notised, that controller can store only four weekly time shedules, one per door. Im i right? If so, then it's a very poor functionality

12) I call

void Insert\_Card(LLONG lLoginID, int& nRecrdNo)

setting bIsValid = TRUE and

emStatus = NET\_ACCESSCTLCARD\_STATE\_LOSE

has no effect. When i call

BOOL DevCtrl\_GetRecordSetInfo(LLONG lLoginID, int nRecordSetType)

on just added card bIsValid is set to FALSE and emStatus is NET\_ACCESSCTLCARD\_STATE\_NORMAL

Alsaw, UserId is always empty, nUserTime is always 0, stuCreateTime is filled with zerros, stuValidStartTime and

stuValidEndTime dwHour, dwMinute and dwSecond are zerros too.

Is it right behaviour?

A:bIsValid、UserId are not supported by BSC. dwHour、dwMinute、dwSecond of stuValidStartTime and stuValidEndTime are also not supported by BSC.

13) I set emType to NET\_ACCESSCTLCARD\_TYPE\_GENERAL. Does nUserTime affect anything now? I gues it does only if emType is

NET\_ACCESSCTLCARD\_TYPE\_GUEST.

A: Correct. nUserTime isn't working if emType is NET\_ACCESSCTLCARD\_TYPE\_GENERAL. It is working only if emType is NET\_ACCESSCTLCARD\_TYPE\_GUEST.

14) One more time about SznDoors. I have two doors with two card readers on every door. Four card readers in total. I am adding

a card to controller and i want to give access for the first card reader of the first door and for the second card reader on

the second door. My sznDoors wheel be 1 and 4. Am i right?

A:u r right.

15) I don't get usage of CardRec. I want to add, edit and remove cards. Do I need cardRec? What are they for?

A:CardRec is a unique id for a card. Different cards have different CardRec. There is no 2 same CardRec between 2 cards. CareRec is generated from BSC by adding a card. After that, u can edit、get、update and remove this card. BSC operates these relative info of the card by CardRec.

16) dwHour、dwMinute、dwSecond of stuValidStartTime and stuValidEndTime are also not supported by BSC

I gues, when adding a card, only hour, minute and second properties of stuValidStartTime and stuValidEndTime does't matter.

And year, month and second are steen needed. Correct?

A:Correct. Only year、month、day of stuValidStartTime and stuValidEndTime is needed.

17) About CardRec

SDK supports adding, aditing, deleting and searching of CardRecs. Do i realy need all these functions, if i only want to add.

remove and edit cards(not card recs)?

A: Depending on ur requirements. If u only want to add, edit and remove card, CareRec is also needed when edit and remove cards.

18) When i add a Card, CardRec is adding automaticly?

If so. what will happen to Card, if i will delete corresponding CardRec

A: Yes. CardRec is stored in struct NET\_RECORDSET\_ACCESS\_CTL\_CARD when adding a card after CLIENT\_ControlDevice() successfully returnes. U may also find that CareRec is the only necessary param when removing card.

19) IMHO, nCannel is't so good for naming time shedule index, and MAX\_DOOR\_TIME\_SECTION is't good for max time intervals per

day. So i was a bit confused

A:  Sorry,  i don't understand the two "is't good".

20) Functions

BOOL DevCtrl\_OpenDoor(LLONG lLoginId)

BOOL DevCtrl\_CloseDoor(LLONG lLoginId)

void DevState\_DoorStatus(LLONG lLoginId)

have

stuParam.nChannelID = 0;

in their body

What is nChannelID?

A: nChannelID means the sequence of door. 0 means the first door, 1 means the second door.

21) You said that i have to pay no attention to stuCard.szUserID when adding a Card. And what about adding a Password? Should I ignore it too. And is the best value for that szUserID? Null, empty string, "0". After all, what does szUserID for?

A: Yep, u don't need to do anything about szUserID.

22) We are using Microsoft .NET Framework technology stack in our development. Your SDK uses C++. So we have to have some wrapper. Mybee you,v already have binding to C#?

A: Sorry, we haven't wrappered C++ SDK interfaces to C#. U have to do it  urself.

23) We are planning stress tests on your SDK. Something like writing and deliting large amount of cards. I am not shure about the perfomance and behaviour on connection lost and reconnection logic. If we would't be sattisfied whith SDK, could you give us low-level protocols over tcp-ip or udp(don't know your are using, but i gues one of theese)

A: SDK's job is communicating protocols with firmware and converting data between protocols and structs. Low level libraries have been running in many large projects for years.I don't think there will be problems.

24) hi , i c why u keeping asking CareRec.

CardRec actually is nRecNo in structs NET\_RECORDSET\_ACCESS\_CTL\_CARDREC.

nRecNo in NET\_RECORDSET\_ACCESS\_CTL\_CARD 、 NET\_RECORDSET\_HOLIDAY、NET\_RECORDSET\_ACCESS\_CTL\_PWD is the same meaning.

25) I call

BOOL DevCtrl\_GetLogCount(LLONG lLoginID)

Number of logs is always 2 whatever QUERY\_DEVICE\_LOG\_PARAM fields are. I

tried to set stuStartTime and stuEndTime to futire

or to the past, I playd with nStartNum, nEndNum and nLogStuType - but I

always get 2.

By the way, what is nLogStuType?

A:BSC doesn't support any query conditions for querying log and the interface CLIENT\_QueryDeviceLog() is not good enough which only gets the first ten log items. If u wanna use this function, i'm afraid u have to wait for new interfaces next week. I'll provide u an updated NetSDK.

26) Both

BOOL DevCtrl\_GetLogCount(LLONG lLoginID)

and

BOOL Dev\_QueryLogList(LLONG lLoginID)

use nStartNum and nEndNum. I gues it acts like a through unique

identifier of event log.

But, \_DH\_DEVICE\_LOG\_ITEM\_EX has no integer field that could take a role

of such an identifier.

A: Dev\_QueryLogList shows u how to quer log items and their detail info. DevCtrl\_GetLogCount shows u how to get the log count with certain query conditions. Here, any query condition is not supported by BSC.

27) I alsaw don't see it in in

BOOL CALLBACK MessageCallBack(LONG lCommand, LLONG lLoginID, char \*pBuf,

DWORD dwBufLen, char \*pchDVRIP, LONG nDVRPort, LDWORD dwUser)

So, how should I use nStartNum and nEndNum?

A: MessageCallBack is regardless with querying log. MessageCallBack is for listening events.

28) Functions like Insert\_Holiday and Update\_Holiday are operation with

holidays. But there is no reference to holiday in

Card, CarsRec or Password(like they are linked with TimeShedule, for

example). It seems like holiday is kind of isolated

object. It takes no role in buisness logic on the controller level. Are

you using controller as a data storage for holidays

data to use in futher time tracking or so?

A: Holiday, corresponding to NET\_RECORDSET\_HOLIDAY, is used with configuration of AccessControl and AccessTimeSchedule.

29) One more time about the usage of CardRec

(NET\_RECORDSET\_ACCESS\_CTL\_CARDREC)

I found only one case, when CardRec can help me

I want to add a NET\_RECORDSET\_ACCESS\_CTL\_CARD,

and set stuCard.szPsw

Now, because the card has a password, I have to tell controller the

secuence of passing person through the door. Should he

pass a card abd then enter his personal password, or vice vera.

This could be done by setting

stuCardRec.emMethod

of NET\_RECORDSET\_ACCESS\_CTL\_CARDREC

in Update\_CardRec() function.

Im I richt? Should i add a Card and then edit CardRec?

A: Yes, u r right. Update\_CardRec() is doing the job of edit.

30) EventAttach project

section

// access event

else if (DH\_ALARM\_ACCESS\_CTL\_EVENT == lCommand)

What is pstuAlarmInfo->szDoorName? How can I set this name?

A: BSC doesn't suppport this param and u can't set this.

31) Does BOOL CALLBACK MessageCallBack(LONG lCommand, LLONG lLoginID, char

\*pBuf, DWORD dwBufLen, char \*pchDVRIP, LONG nDVRPort, LDWORD dwUser)

is a complete example of all possible evens. Or can i recieve event with

different lCommand?

A: Yep, u can use the callback function for all possible events. All events differ from differ lCommand.

32) I am using WPF/C#. I subscribed

CLIENT\_SetDVRMessCallBack

in my C# code. But sometimes i get "null reference exception" uncathed

exception. I'v already found walkaround, but anyway,

have you any ideas of what could happen?

A: Sorry, I really have no idea about C#.

33) void DevConfig\_AccessControl(LLONG lLoginId)

What is nChannel? Door number?

A: It's Door number.

34) Imagine I have conneced to controller and called some functions.

Then connection was lost

The next function call ends with error.

How can I know if connection was lost and what should I do to reconnect?

And if I am only subscribed to log events and do calls - how will I know

then about connection lost?

A: When use CLIENT\_Init(fDisconnect, userParam), first and second params are set to disconnection callback.

If u wannt use reconnection, use CLIENT\_SetAutoReconnect() to set reconnection callback.

35) What defaults does

BOOL DevCtrl\_DeleteCfgFile(LLONG lLoginID)

affects?

A:  Set all configurations to default and clear all records, except IP、Netmask and Gateway.

36) Here's what I want from evnt log monitoring

Steps I want to reproduce in my SDK example

- I successfully connect to the controller

- I subscribe to events

- I pull out ethernet wire

- I Wait for a half a minute untill SDK will understand the connection

has lost

- I Pass a card to card reader few times to generate events

- I plug in ethernet wire

- Do some reconnect logic

- Read all missing logs, occured during connection was lost

- Continue recieving new events

Whell, I gues I know how to reconnect, but I'm not shour I'm right(I'm

not shour if I neet to reconect or cleanup before

connecting again, and do I neet to subscribe to events again)

But I have no idea about reading missing logs

So, could you please modify EventAttach project for us to demonstrate

steps, described above

It's a very importiant feature for us. Whitout it we can't process time

tracking

A: In "Do some reconnect logic" stage, u don't need to logout or cleanup while CLIENT\_StopListen() is needed. Then u may call CLIENT\_StartListenEx() again. Other control operations is the same as before disconnection by using the lLoginID returned from CLIENT\_Login().

In "Read all missing logs, ..." stage, JianJun may help to answer it.

37) I noticed, that SDK can detect connection lost in about 20 seconds.

What is the exact time and how can I modify it?

A: SDK detects bsc online status every ten seconds. Disconnection will be detected no more than 60 senconds.

I recommend u not to modify this detection period and this is also not allowed in SDK. Because the shorter period is not proper for long time delay envirnment such as WLAN.

38) You sad that SDK can automaticaly reconnect. I use EventAttach

project. I set breakpoint to

void CALLBACK HaveReConnectFunc(LLONG lLoginID, char \*pchDVRIP, LONG

nDVRPort, LDWORD dwUser)

but debugger never steps into it(when I pull out ethernet wire), thow it

does in

void CALLBACK DisConnectFunc(LLONG lLoginID, char \*pchDVRIP, LONG

nDVRPort, LDWORD dwUser)

What am I doung wrong?

A: I think u encoutered a bug which is fixed in latest version of sdk, pls try it packeted with this email.

etc: Since accounts of BSC is not reusable, BSC do not allow user to reconnect right after disconnected. So reconnection will not be successful until roughly 40 seconds after disconnection.

39) EventAttach projec. MessageCallBack

In your example lCommand can be equal to DH\_ALARM\_VEHICLE\_CONFIRM or

DH\_ALARM\_VEHICLE\_LARGE\_ANGLE. I don't think my

controller can generate such events that contains NET\_GPS\_STATUS\_INFO.

Does my controller supports this?

A: This project does not only support BSC, so u may find other events. I'm not sure if u got a proper manual of BSC. I send u a manual which illustrated what BSC supports and SDK supports. U may find it in "supported event". This manual may include most of the funcitons.

40) Thanks alot for new SDK redistributables. Bug with HaveReConnectFunc

has gone avay.

No bebugger steps into HaveReConnectFunc

I modified your example like this

void CALLBACK HaveReConnectFunc(LLONG lLoginID, char \*pchDVRIP, LONG

nDVRPort, LDWORD dwUser)

{

BOOL bRet = CLIENT\_StartListenEx(lLoginID);

}

Without recalling CLIENT\_StartListenEx I don't get events any more.

Is it a bug, or a feature? If it's a feature, then why don,t you recall

CLIENT\_StartListenEx in you original example, which

's main purpose is to demonstrate event log monitorin even after

reconnection

A: It's not a bug. As I metioned in last email, u should call CLIENT\_StopListen() and then CLIENT\_StartListenEx() again after reconneciton is done. Otherwise there  is no events to catch. Note that CLIENT\_StopListen() should not be ignored.

I have to say, actually, EventAttach project is not built to illustrate the reconncection, for CLIENT\_StartListenEx() only.

Tips:  Never call any CLIENT\_XXX() in any callback functions set in SDK or u may face dead lock risk. U may send signals from callback funtions to working threads which call SDK interfaces.

41) I'll descripbe my controller's behaviour

Sutuation one

- I pull out ethernet wire

- DisConnectFunc fired

- I IMMEDIALELY plug in ethernet wire

- DisConnectFunc fired 3-5 times

- HaveReConnectFunc

Sutuation two

- I pull out ethernet wire

- DisConnectFunc fired

- I wait few minutes

- I plug in ethernet wire

- HaveReConnectFunc

The difference between these two cases as you can see is that I get few

DisConnectFunc if I don't pause between pulling out and plugging in

again

Is it expected behavior? Does it correlate whit as you said

"etc: Since accounts of BSC is not reusable, BSC do not allow user to

reconnect right after disconnected. So reconnection

will not be successful until roughly 40 seconds after disconnection."?

A: It is expected behavior. If the disconnectd time is more than 60 seconds, reconnection will be done right away. If u test reconnection by reboot BSC, there will not be this kind of behavior.

42) After I replaced SDK redistributable dlls, I get error when calling

DevConfig\_AccessGeneral,

DevConfig\_AccessControl,

DevConfig\_AccessTimeSchedule,

Insert\_CardRec

testRecordSetFindNext\_Card finds no cards

and so on

Maybe I have to update firmware?

The set of thees bugs paralyse my work

A: Yes, u need to update the firemare.

@JianJun and WenJun: pls provide updated fireware.

43) Insert\_Card

whatever values I set to nDoorNum, sznDoors[], nTimeSectionNum,

sznTimeSectionNo[], it always adds 2 doors(1 and 2)

A: sznDoors and sznTimeSectionNo are connected params. nDoorNum and nTimeSectionNum should be equal. I think updated fireware will fix it.

44) I actualy don't like callback from managed C# code to unmanaged code C++ code. I'd prefere polling model, if you don't mind. Here's an idea:

1) We want to monitore controller's event logs

2) Every log has ins own through identifier that increments on every new event log

3) I have stored last identifier, corresponding to last event I get

4) Every time programm starts, I get controller,s last event identifier

5) I compare new last identifier to one, I stored befre

6) If new last identifier if greater the the stored one, then I read missing event logs with identifier graeter then stored one and less or equal then new one

7) Do steps 4-6 in the infinite loop

I have an experience in driver development(like you SDK) and I used described scheme in practice many times with many devices.

Can you provide me an example, that works like this?

I'm afraid I'm confused with the limitation of SDK, and the tip mentiond in the last answer does't make me happy. I'v already have problem with callback to my C# code. Now I have a C++ DLL, that incapsulates all callback and reconnection logic and a C# project that polls this C++ DLL for new events. I don't think it's a best practice - it's a worst workaround. So I hope to improve my mazy code with polling model

45) Do you have Web service to SDK or somethig?

46) You said

"sznDoors and sznTimeSectionNo are connected params. nDoorNum and nTimeSectionNum should be equal"

Imagine I have a controller with 4 card readers and 100 TimeShedules

I want give a person a card, that can pass through first and second door withit 10-20 TimeShedules

My code will be like this

stuCard.nDoorNum = 2;

stuCard.sznDoors[0] = 1;

stuCard.sznDoors[1] = 2;

stuCard.nTimeSectionNum = 11;

stuCard.sznTimeSectionNo[0] = 10;

stuCard.sznTimeSectionNo[1] = 11;

stuCard.sznTimeSectionNo[2] = 12;

stuCard.sznTimeSectionNo[3] = 13;

stuCard.sznTimeSectionNo[4] = 14;

stuCard.sznTimeSectionNo[5] = 15;

stuCard.sznTimeSectionNo[6] = 16;

stuCard.sznTimeSectionNo[7] = 17;

stuCard.sznTimeSectionNo[8] = 18;

stuCard.sznTimeSectionNo[9] = 19;

stuCard.sznTimeSectionNo[10] = 20;

As you can see, doors and time sections are not equal

Or I don't understand the meaning of NET\_RECORDSET\_ACCESS\_CTL\_CARD structire again?

47) Can I update firmware with SDK?

**A: Yes, u can.**

48) Can I run two SDK exaples on one computer and connect to the same Controller?

**A: Yes.**

49) Imagine I have two controllers

So I have to call CLIENT\_Login twice

But to I need to call

CLIENT\_Init

CLIENT\_SetAutoReconnect

CLIENT\_SetDVRMessCallBack

and

CLIENT\_Cleanup

I gues I don't. Right?

**A:  I guess u wanna say that CLIENT\_Init()、CLIENT\_SetAutoReconnect()、CLIENT\_SetDVRMessCallBack() and CLIENT\_Cleanup() once? Yes, they indeed need be called only once.**

50) What about thread safety. If I connect from one thread and then call some function from another thread(not from callback). Is there risk of deadlock?

**A: SDK interfaces are all thread safe. U may call different interface in different threads(except in callback because they owe to sdk inner thread). There won't be and shouldn't be any risk of deadlock.**

**51) Show me example of firmware updating process**

**52) A ran two different SDK examples from different locations and connect to the same controller. But only the first attempt is successful. Second one returns error code -1. What am I doing wrong**

**53) Give me the list and the meaning of possible error codes on** CLIENT\_Login

54) I am calling Insert\_Card

There we set CardNo like this

memcpy(stuCard.szCardNo, strTemp.c\_str(), \_\_min(DH\_MAX\_CARDNO\_LEN,strTemp.length()));

And then we get RecordNo of just added card

nRecrdNo = stuInert.stuCtrlRecordSetResult.nRecNo;

In my experiments nRecrdNo was always just the same as CardNo

So, is there a chance to nRecrdNo not equal to CardNo?

55) DevState\_DoorStatus

Get status of the door if it is opened or closed.

Are there same “GET\_STATE” functions related to controller itself or it’s card readers? Maybe we can get some kind of controller’s state if we want to know controller’s failures?

56) When I subscribed to events, I can receive events with lCommand equal to only

DH\_ALARM\_ACCESS\_CTL\_EVENT

DH\_ALARM\_ACCESS\_CTL\_NOT\_CLOSE

DH\_ALARM\_ACCESS\_CTL\_BREAK\_IN

DH\_ALARM\_ACCESS\_CTL\_REPEAT\_ENTER

DH\_ALARM\_ACCESS\_CTL\_DURESS

Maybe there are some other possible events. For example, events, that describe failures, reboots and so on?