



# HDK New Features

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*Sony Computer Entertainment Inc.*



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# About This Document

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- ⌘ *This document introduces some HDK new features which are useful to most developers.*



# HDK1.70

# HDK1.70 Features (1)

Added

- 🏠 *A new Save Data Service allows you to save 4K of data to SCE's server using the following Lua APIs.*
  - *AsyncCommands.SaveDataSave*
  - *AsyncCommands.SaveDataLoad*
  - *Please refer to the "Systems and Services > PS Home Save Data Service" documentation for more detail.*
  
- 🏠 *Create new Portable "Locomotion" Items to modify the avatar's movement.*
  - *e.g.*
    - *Hoverboard*
    - *Horse*
    - *Parrot on Shoulder*
    - *Dragon in a Backpack*
  - *You can control avatar's run speed (max 5.2m/s) and animations.*
  - *The max value of the run speed is configured and limited by the client/server side so that avatar's will not jump/float; however, we recommend you to have high height collisions in your spaces (especially around slopes).*
  - *Please refer to the "Objects > Locomotion Objects" documentation for more detail.*

# HDK1.70 Features (2)

Added

- 🏠 *Create custom emotes with sounds with the Avatar Animation Pack (a Portable Item).*
  - *Your animations will be added to the Emote menu when Players use the Portable Item.*
  - *Attached sounds will be played for the Local Player only.*
  - *Use the Object Editor's Wizard to create the Avatar Animation Pack, then attach the animation data created in the Repertoire Editor.*
  - *Please refer to the "Animation and Effects > Avatar Animation > Avatar Animation Packs" documentation for more detail .*
  
- 🏠 *Easily test localization changes by switching languages using the debug console command: setLanguage.*
  - *Example: setLanguage en-GB*
  - *This only changes the language displayed for objects. If you want to change the language for all PS Home UI (e.g. to test Scene localization), reboot PS Home and change the locale at the login screen.*

# HDK1.70 Features (3)

Added

- Commerce UI has improved reducing the steps to purchase an item.
  - Object details will be shown by just focusing the object.



- A "Buy Now" option enables users to purchase the item in focus.

# HDK1.70 Features (4)

Added

- ⌂ A “Camera” may now be selected in the Emote menu (R1) enabling users to take pictures when playing a Mini-Game.
- When the camera control is done by a scene script or a Mini-Game, the emote camera cannot be used, and an error message will be shown. In this case, users can take a picture using existing Portable Item Camera.



# HDK1.70 Features (5)

Added

- ⌘ *A new Intersect APIs were added to speed the calculation of intersections between objects.*
  - *The library will work with the following shapes:*
    - *Ray/Line/Segment*
    - *Sphere/Circle*
    - *Plane*
    - *AABB (2D and 3D)*
  
- ⌘ *New Scene APIs can be used to determine when a scene transition is complete and when all the objects placed in the scene have loaded.*
  - *Scene.IsLoading*
  - *Scene.IsLoadingObjects*

Please refer “Welcome - JP” in HDK1.70 Help Wiki for other features.

# HDK1.70 Features (6)

Added

🏠 A new Scene Type, “Personal Video Space,” is added.

| Scene Type Name                                              | Public Lobby | Public Lobby (No Video) | Game Space (60 Players) | Game Space (32 Players) | Game Space (16 Players) | Video Space | Personal Space | Personal Video Space | ClubHouse |
|--------------------------------------------------------------|--------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------|----------------|----------------------|-----------|
| Player Cap (Hard Cap)<br>(Limit number including invitation) | 60 people    | 60 people               | 60 people               | 32 people               | 16 people               | 16 people   | 12 people      | 12 people            | 32 people |
| Soft Cap<br>(Limit number without invitation)                | 45 people    | 45 people               | 45 people               | 24 people               | 12 people               | 12 people   | N/A            | N/A                  | N/A       |
| Portable Items                                               | OK           | OK                      | NG                      | NG                      | NG                      | OK          | OK             | OK                   | OK        |
| Screens                                                      | OK           | NG                      | NG                      | NG                      | NG                      | OK          | OK             | OK                   | OK        |
| SD Videos                                                    | OK           | NG                      | NG                      | NG                      | NG                      | OK          | OK             | OK                   | OK        |
| 720p(HD) Videos                                              | NG           | NG                      | NG                      | NG                      | NG                      | OK          | NG             | OK                   | NG        |
| Web Browser                                                  | OK           | NG                      | NG                      | NG                      | NG                      | NG          | OK             | NG                   | OK        |
| Flash Player in a Web Browser                                | OK           | NG                      | NG                      | NG                      | NG                      | NG          | NG             | NG                   | NG        |
| Furniture                                                    | NG           | NG                      | NG                      | NG                      | NG                      | NG          | OK             | NG                   | OK        |
| Active Items                                                 | NG           | NG                      | NG                      | NG                      | NG                      | NG          | OK             | NG                   | OK        |
| Arcade Games                                                 | OK           | NG                      | NG                      | NG                      | NG                      | OK          | OK             | NG                   | OK        |
| Embedded Objects                                             | OK(*)        | OK(*)                   | OK(*)                   | OK(*)                   | OK(*)                   | OK          | NG             | NG                   | NG        |
| Main Memory Limitation                                       | 12.8MB       | 31MB                    | 38MB                    | 42.0MB                  | 43.0MB                  | 7.8MB       | 8.5MB          | 7.8MB                | 8.5MB     |
| Host Memory Limitation                                       | 17.4MB       | 17.4MB                  | 25MB                    | 30.7MB                  | 34.0MB                  | 31.9MB      | 10.0MB         | 31.9MB               | 10.0MB    |
| VRAM Limitation                                              | 74MB         | 90MB                    | 105.2MB                 | 106.5MB                 | 107.3MB                 | 87.0MB      | 55.1MB         | 87.0MB               | 55.1MB    |

## 🏠 NAT Type 3 players no longer join Realtime Games.

- *In order to prevent users with a Type 3 NAT configuration from causing issues for other players in RtGame sessions, these users will no longer be permitted to join activities which use the RtGame component.*

## 🏠 Please see the Tech Notes on PS Home DevNet

- *Important information, including known issues, have been announced.*

# HDK1.65

# HDK1.65 Features (1)

## 🏠 New Scene Types are added.

- Game Space (60 Players) and Public Lobby (No Video)
- If your scene's scene type will be set to one of the following except Public Lobby, please write so in your proposal document and your spec document for QA.
- Because of the server resource, relocating to Game Space(32 Players/16 Players) and Video Space from Navigator is prohibited. Instead, you can relocate such spaces by using LocalPlayer.RelocateToUniqueInstance or LocalPlayer.RelocateToGroupInstance APIs.  
(<https://home.scedev.net/technotes/view/53>)

| Scene Type Name                                              | Public Lobby                                                       | Public Lobby (No Video) | Game Space (60 Players) | Game Space (32 Players) | Game Space (16 Players) | Video Space | Personal Space | ClubHouse |
|--------------------------------------------------------------|--------------------------------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------|----------------|-----------|
| Player Cap (Hard Cap)<br>(Limit number including invitation) | 60 people                                                          | 60 people               | 60 people               | 32 people               | 16 people               | 16 people   | 12 people      | 32 people |
| Soft Cap<br>(Limit number without invitation)                | 45 people                                                          | 45 people               | 45 people               | 24 people               | 12 people               | 12 people   | 12 people      | 32 people |
| Portable Items                                               | OK                                                                 | OK                      | NG                      | NG                      | NG                      | OK          | OK             | OK        |
| Screens                                                      | OK                                                                 | NG                      | NG                      | NG                      | NG                      | OK          | OK             | OK        |
| SD Videos                                                    | Please refer HDK1.70 info as a new Scene Type is added in HDK1.70. |                         |                         |                         |                         |             |                | OK        |
| 720p(HD) Videos                                              | NG                                                                 | NG                      | NG                      | NG                      | NG                      | OK          | NG             | NG        |
| Web Browser                                                  | OK                                                                 | NG                      | NG                      | NG                      | NG                      | NG          | OK             | OK        |
| Flash Player in a Web Browser                                | OK                                                                 | NG                      | NG                      | NG                      | NG                      | NG          | NG             | NG        |
| Furniture                                                    | NG                                                                 | NG                      | NG                      | NG                      | NG                      | NG          | OK             | OK        |
| Active Items                                                 | NG                                                                 | NG                      | NG                      | NG                      | NG                      | NG          | OK             | OK        |
| Arcade Games                                                 | OK                                                                 | NG                      | NG                      | NG                      | NG                      | OK          | OK             | OK        |
| Embedded Objects                                             | OK(*)                                                              | OK(*)                   | OK(*)                   | OK(*)                   | OK(*)                   | OK          | NG             | NG        |
| Main Memory Limitation                                       | 12.8MB                                                             | 31MB                    | 38MB                    | 42.0MB                  | 43.0MB                  | 7.8MB       | 8.5MB          | 8.5MB     |
| Host Memory Limitation                                       | 17.4MB                                                             | 17.4MB                  | 25MB                    | 30.7MB                  | 34.0MB                  | 31.9MB      | 10.0MB         | 10.0MB    |
| VRAM Limitation                                              | 74MB                                                               | 90MB                    | 105.2MB                 | 106.5MB                 | 107.3MB                 | 87.0MB      | 55.1MB         | 55.1MB    |

# HDK1.65 Features (2)

🏠 *Menu PAD is replaced by Menu Screen.*



🏠 *A Shop became accessible from Wardrobe.*

- *Which shop to be connected is different region by region.*



# HDK1.65 Features (3)

- ⌂ A new Furniture Block System is used for furniture placement, and now you can create an Active Item which uses 1 – 100 blocks against 100 block availability in a Personal Space.



- In HDK1.60, an Active Item uses static 22 blocks, but in HDK1.65, it is possible to create an Active Item using less than 22 block, and as a result, users can place more than 4 Active Items.
- Used blocks can be profiled by Active Profiler, and the exact value must be input in the Object Editor. If wrong value is input, the client may crash.

| Active Profiler                       |          |      |      |      |      |
|---------------------------------------|----------|------|------|------|------|
| Duck Down Records Boombox             |          |      |      |      |      |
| {035FE919-4FAB4330-B5D1D556-D3880C5C} |          |      |      |      |      |
| FIELD                                 | STAT     | DECL | CURR | RCNT | PEAK |
| PPU                                   | 0.47ms   | [22] | [5]  | [12] | [12] |
| Main                                  | 201.3Kb  | [22] | [5]  | --   | ---  |
| Host                                  | 230.6Kb  | [22] | [3]  | --   | ---  |
| URAM                                  | 1536.6Kb | [22] | [6]  | --   | ---  |
| NET                                   | 0.0KB/s  | [22] | [1]  | [7]  | [7]  |

Edit Resource Usage

Info

Use this editor to specify 'Resource Usage' values for your Active Item.

- Profile the Active Item in the client to obtain Resource Usage values.
- Manually enter Resource Usage values below.

Inaccurate Resource Usage values will cause client issues, QA rejection and therefore require re-submission.

Edit

|      |                                |
|------|--------------------------------|
| MAIN | <input type="text" value="5"/> |
| HOST | <input type="text" value="3"/> |
| VRAM | <input type="text" value="6"/> |
| PPU  | <input type="text" value="7"/> |
| NET  | <input type="text" value="1"/> |

# HDK1.65 Features (4)

## 🏠 *New features are added to Companion Objects*

- *The Core Script used for a companion object now can be updated separately from the companion object data, and can add new features and bug fixes without updating the companion object itself.*
- *Some flying modes are supported*
  - *following*
  - *hovering*
  - *orbiting*
  - *perching on the owner's shoulder*
- *Now you can use Sounds and Particles*
- *The Core Script's Path Finding Algorithm is improved*
- *From HDK1.65, you need to check both local and remote memory usage in QA*  
[HDK Help > Testing, Validating and Submitting Content > Profiling in the Client > Profiling Objects > Profiling Companion Objects](#)  
[HDK Help > Objects > Companion Objects > Allocating Memory for Companion Assets](#)

## 🏠 *Now Object Editor can handle data project by project*

- *It's intuitive and easy to access to your data.*
- *If you share the project definition fine, you can have the unified development environment.*
- *Now you can package all assets which relates to your project at once.*

# HDK1.65 Features (5)

## 🏠 *Some features are added to Group function*

- *You can invite your friend into your group directly*
  - *Friends outside of PS Home can be invited, too.*
- *Group APIs are added*
  - *Create a group*
  - *Add/Delete members*
  - *Search a Member*

## 🏠 *Animation Blending*

- *Now you can blend avatar's animations*

Please refer “Welcome” in HDK1.65 Help Wiki for other features.

# HDK1.65 Notes

## 🏠 *HDK Help is placed online*

- *Please access the following URL with your DevNet account ID and password.*

<https://docs.home.scedev.net/>

## 🏠 *Please refer Tech Note in PS Home DevNet*

- *Important information including HDK's known issues are announced.*

# HDK1.60

# HDK1.60 Features (1)

Content release date is changed from Thursday to Wednesday.

By selecting scene type, you can increase memory amount to be used by Lua scripts in a scene.

- If your scene's scene type will be set to one of the following except Public Lobby, please write so in your proposal document and your spec document for QA.
- Because of the server resource, relocating to Game Space(32 Players/16 Players) and Video Space from Navigator is prohibited. Instead, you can relocate such spaces by using LocalPlayer.RelocateToUniqueInstance or LocalPlayer.RelocateToGroupInstance APIs.  
(<https://home.scedev.net/technotes/view/53>)

| Scene Type Name                                              | Public Lobby |  |  | Game Space (32 Players) | Game Space (16 Players) | Video Space | Personal Space | ClubHouse |
|--------------------------------------------------------------|--------------|--|--|-------------------------|-------------------------|-------------|----------------|-----------|
| Player Cap (Hard Cap)<br>(Limit number including invitation) | 60 people    |  |  | 32 people               | 16 people               | 16 people   | 12 people      | 32 people |
| Soft Cap<br>(Limit number without invitation)                | 4 people     |  |  | 24 people               | 12 people               | 12 people   | 12 people      | 32 people |
| Portable Items                                               | OK           |  |  | NG                      | NG                      | OK          | OK             | OK        |
| Screens                                                      |              |  |  |                         |                         |             |                | OK        |
| SD Videos                                                    | OK           |  |  | NG                      | NG                      | OK          | OK             | OK        |
| 720p(HD) Videos                                              | NG           |  |  | NG                      | NG                      | OK          | NG             | NG        |
| Web Browser                                                  | OK           |  |  | NG                      | NG                      | NG          | OK             | OK        |
| Flash Player in a Web Browser                                | OK           |  |  | NG                      | NG                      | NG          | NG             | NG        |
| Furniture                                                    | NG           |  |  | NG                      | NG                      | NG          | OK             | OK        |
| Active Items                                                 | NG           |  |  | NG                      | NG                      | NG          | OK             | OK        |
| Arcade Games                                                 | OK           |  |  | NG                      | NG                      | OK          | OK             | OK        |
| Embedded Objects                                             | OK           |  |  | OK(*)                   | OK(*)                   | OK          | NG             | NG        |
| Main Memory Limitation                                       | 12.8MB       |  |  | 42.0MB                  | 43.0MB                  | 7.8MB       | 8.5MB          | 8.5MB     |
| Host Memory Limitation                                       | 17.4MB       |  |  | 30.7MB                  | 34.0MB                  | 31.9MB      | 10.0MB         | 10.0MB    |
| VRAM Limitation                                              | 74MB         |  |  | 106.5MB                 | 107.3MB                 | 87.0MB      | 55.1MB         | 55.1MB    |

Please refer HDK1.65 info as new Scene Types are added in HDK1.65.

# HDK1.60 Features (2)

🏠 *A debug command to overwrite server time is added.*

- *By this command, no longer you don't have to submit "local time version" of your content to QA, then, resubmit "server time version."*
  - *Please submit "server time version" from the first.*
- *setOverrideServerTime yyyy mm dd hh mm ss*
  - *e.g. If you want to set time to 2012/01/06 13:00PM*  
*setOverrideServerTime 2012 01 06 13 00 (ss can be omitted)*
  - *If you want to clear the overwritten time, please just type "setOverrideServerTime" without time.*

🏠 *When you open the debug console, PPU load will be displayed.*



Please refer "Welcome: HDK1.60" in HDK1.60 documents for other features.

# Notes on HDK1.60

- 🏠 *3DS Max Support in HDK was finished.*
  - <https://home.scedev.net/technotes/view/38>
- 🏠 *When you use Quick Purchase feature, you MUST display the same information as ordinal commerce points.*
  - *Please consider Quick Purchase as a feature to develop your own CP UI, but not skip purchase steps.*
  - *Details are described later in this document.*
- 🏠 *Scene Editor changed it's project file from .scene to .scproj file.*
  - *.scene is a scene data which will be included in a package. If you try to load a .scene file created in a previous HDK, you will be asked to create .scproj file.*
  - *.scproj contains settings of Scene Editor. When you save data in Scene Editor, .scene file will be saved as well as .scproj.*

# HDK1.55

# HDK1.55 Features

- ⌘ *Added Resource Pack library which enables an objects to download/access other objects.*
  - *By this library, you can actively change a mini-game to be loaded next. For instance, you can allow only users who paid extra money to download additional mini-games or data.*
- ⌘ *You can bundle objects with a scene data so that they all will be downloaded at once. By this, you can make sure starting your mini-games as soon as a user entered a space.*
  - *At most 8 objects, though.*
- ⌘ *You can place 2D texts in a 3D world as same as Avatar Label.*
- ⌘ *A Lua API which enables you to retrieve the download progress of data called by Resource.Request() is added.*

Please refer “Welcome: HDK1.55” in HDK1.55 documents for other features.

# HDK1.55 Notes

- ⌘ *You cannot release contents packaged by HDK1.55 Beta 1.*
- ⌘ *It is forbidden to change clothing or gender of avatar outside of mini-game or realtime-game.*
  - *When you change avatar's clothing or gender, please lock Wardrobe so that users cannot change clothing and gender by themselves.*
- ⌘ *When a mini-game or a realtime-game finished, changed clothing or gender will be automatically restored by the client.*
- ⌘ *"Load Before Spawn" feature in Scene Editor is disabled because of technical issue.*
  - *please use "pre-download object" feature, for now.*
  - *<https://home.scedev.net/technotes/view/41>*
- ⌘ *The client may crash when you call AsyncCommand.*
  - *<https://home.scedev.net/technotes/view/40>*
- ⌘ *Support for 3DS Max will be end when HDK1.60 is released.*
  - *<https://home.scedev.net/technotes/view/38>*

# HDK1.50

# HDK1.50

- ⌞ *You can create a real-time game which uses P2P connection.*
- ⌞ *You can pass parameters to PS Home when you go back to PS Home from PS3 Game which is booted from PS Home.*
  - *e.g. winner or loser, flags, and high scores*
- ⌞ *You can create Group Instance to which only group members can enter through a Group Door.*
- ⌞ *You can create a session-less mini-game in which messaging will be automatically turned off as you wants to create a stand-alone game which doesn't require messaging.*

Please refer “Welcome: HDK1.50” in HDK1.50 documents for other features.

# HDK1.40

# HDK1.40

- 🏠 *You can create one of Portable Item called “Companion Object” which follows after owner’s avatar.*
- 🏠 *You can create a Global Space where any user from all over the world can enter.*

Please refer “HDK\_Whats\_New” in HDK 1.40 documents for other features.

