

**Announcing
the
2018 International Games SIG Classic Game Showcase**

**featuring
the Intellivision® Game Console**



**final event to be held online and live on stage
September 29, 2018 at Thunder Studios
in Long Beach, California**

IEEE GameSIG, IEEE Southern California and Intellivision Productions, Inc. are pleased to announce a new and exciting addition to the GameSIG competition calendar for 2018.

This Fall, teams from all around the world will compete to design “classic”-style video games in three categories. Winners will lay claim to virtual trophies and get great prizes, not to mention bragging rights; a GameSIG award is an excellent addition to a résumé.

Judges for the event will include original members of the Blue Sky Rangers – the first-generation video game programmers who created games for the Intellivision.

Three categories of games will be judged:

- **Classic Intellivision Games** – designed to run on an Intellivision hardware emulator and capable of running in a physical cartridge on an actual console using Intellivision hand controllers
- **Lookalike Intellivision Games** – designed to operate within the same color, visual and audio constraints as the original games, but written using modern tools such as Unity (detailed technical specifications provided below)
- **Intellivision Reboots** – games inspired by the elegant and engaging gameplay of an original Intellivision title, but using all of the tools and techniques available in a modern video game

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The event will take place on September 29, 2018. For those in other time zones, assume that presentations will take place between 1:00 and 4:00 PM Pacific Time (California).

Entrants will submit an information form and a 2-5 minute YouTube video showing off their apps approximately three weeks before the event. Finalists will be selected and notified approximately one week prior to the event. Attendance in person is not required. Because of the international nature of this event, finalists will be allowed to present their demos and answer the judges' questions via Internet video linkup.

First-, second- and third-place awards will be given out. Other classes of awards, such as a "Best Visuals" or "Best Gameplay" award, may also be given at the discretion of the judges. The Blue Sky Rangers will optionally award a "Best Use of Obscure Hardware Features" award to the team that demonstrates the greatest creativity in the use of unusual CPU features in their game.

All work remains the property of its creators. However, creators cannot use the Intellivision name or mark, or other Intellivision-related marks, in their games, although permission will be granted to use and copy the Intellivision Exec code and character set. Additionally, all content must be original or officially licensed. This means, in particular, that versions of known arcade game titles or titles from other platforms are not allowed, and use of visual assets or text from other creative works is also not allowed.

Note: submissions do not need to be complete games. As long as there is at least one level and it clearly demonstrates the key features of the game, that's sufficient. Likewise, highly polished final graphics are also not required, although they certainly help set expectations higher and we typically see high quality in finalist submissions. Our judges are looking at the game's potential and are able to overlook graphical shortcomings in otherwise high-quality designs.

About IEEE GameSIG «<http://gamesigshowcase.org/>»

Founded in 2006, it is the IEEE's special interest group in computer games. The mission of IEEE GameSIG is career development and the promotion of standards in computer game development. Its members include leaders in the video game industry and academia.

About IEEE «<http://www.ieee.org/>»

IEEE, the world's largest technical professional association, is dedicated to advancing technology for the benefit of humanity. Through its highly cited publications, conferences, technology standards, and professional and educational activities, IEEE is the trusted voice on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics.

About Intellivision Productions «<http://www.intellivisionlives.com/>»

Intellivision Productions, Inc. is dedicated to preserving the fun and history of classic video games. Formed by members of the Blue Sky Rangers--Mattel Electronics' original development team from the 1980s--Intellivision Productions has released several award-winning classic games on modern platforms, as well as partnered with other companies to produce new games and consoles. Intellivision Productions also promotes and licenses its world-famous trademark and intellectual property through releases in music, publishing and other merchandising. Intellivision is a registered trademark of Intellivision Productions, Inc. In July 2018, the company announced the formation of a new entity, Intellivision Entertainment, which will be creating an entirely new video game console for families. More details on this project are scheduled to be announced in late October, 2018.

Intellectual Property Rights

Intellivision Productions, Inc. has graciously allowed the use of the Intellivision internal software and other digital data for this contest and allowed the copying of that data for development and demonstration purposes.

One important component of this contest is ensuring that all participants recognize and acknowledge and respect the intellectual property of other parties. Accordingly, we require all participants to include the following acknowledgement in their submission documents (this need not be in the executable games, since doing so would be rather challenging on the Intellivision cartridges):

“Intellivision, the Intellivision name and trademarks, and technical components such as the EXEC and GROM data files, are the property of Intellivision Productions, Inc. and/or Intellivision Entertainment, LLC and are used by permission.”

Technical Specifications for Classic Intellivision Games

1. Games must be either written in CP1610 assembly language or in IntyBASIC that is compiled into CP1610 code.
2. Games must be capable of fitting into and running from a physical Intellivision cartridge; they must be no more than 24K bytes in size (16-bit ROMs are allowed). Games are allowed to assume the use of up to 8K bytes of RAM, too. Memory map should be:
 - a. ROM:
 - i. \$5000 - \$6FFF (main entry point)
 - ii. \$C040 - \$FFFF
 - b. RAM (16-bit):
 - i. \$8040 - \$9F7F
3. Games are allowed to use the built-in Intellivision executive software (the “Exec”) and related data such as character ROMS and to make copies of these elements for development and demonstration purposes.
4. Documentation for the Exec, in the form of the manual “Your Friend the Exec” will be made available electronically to all competitors.
5. Games are allowed to assume the presence of additional peripherals such as the Intellivoice™ voice module and ECS Keyboard, if desired.
6. Games should be designed to work on Intellivision hand controllers, which are assumed to be the controller of choice for each game. Support for keyboard-based alternative controls and support for other types of video game controllers such as those used on other video game consoles is allowed, but the game must still be playable and all functionality accessible via a standard Intellivision controller.
7. Games must conform in all respects to the execution speed, video display and audio output parameters of the original console, such as CPU clock speed (800 kHz), video resolution (160 x 96 plus borders) and number/range of audio channels (three). This includes prohibitions on changing the STIC registers outside of the vertical retrace interval (so repositioning of sprites when the screen is being drawn, for example, is not allowed). See also the Color Palette definitions below under “Lookalike Intellivision Games”.
8. All games should include a title screen that appears as soon as Reset is pressed

9. Games should incorporate entirely original code and assets. A “Super Space Hawk” game would be allowed, but the programmer cannot start with the ROM image of the cartridge and simply modify it.
10. Games should not depend on any proprietary third-party components (for example, a custom input/output controller or storage device).
11. Finalists will be required to demonstrate live play of their games during the event; recordings of gameplay are not allowed. They are allowed to use emulators during the demonstration, as long as those emulators are configured to operate in a manner consistent with an original Intellivision (per #7, above). They must use Intellivision hand controllers when demonstrating the game.

Technical Specifications for Lookalike Intellivision Games

1. Lookalike games are those that adhere to all of the audiovisual and I/O limitations of the Intellivision console but can be written in a modern language and most likely require modern hardware such as a personal computer to run.
2. The key technical parameters that must be respected in the game are:
 - a. Color set: sixteen colors identical to those in the Intellivision palette. Precise RGB values, subject to change, are:

i.	0	0	0
ii.	18	77	173
iii.	189	91	74
iv.	187	174	109
v.	47	130	6
vi.	85	173	57
vii.	241	224	76
viii.	255	255	255
ix.	124	124	124
x.	94	184	171
xi.	208	156	82
xii.	75	79	1
xiii.	200	103	50
xiv.	142	136	255
xv.	137	199	53
xvi.	137	60	184
 - b. Background Resolution: 20 x 12 cards, each 8x8 pixels in size, each with a maximum of two colors.
 - c. Card contents can be drawn from GRAM or GROM, but the total number of unique cards at one time cannot exceed the total available on the Intellivision
 - d. Sprites: eight sprites with single-and double-height modes; double-height sprites have a resolution of 8x16 pixels (note that pixels are not square). Sprites can have only one color
 - e. Audio: three channels with three waveform types and a range of frequencies matching those generated by the Intellivision hardware
 - f. Video refresh rate: 59.97 Hz (NTSC). In some countries, if only PAL/SECAM devices are available for demo and display purposes, those video frequencies may be used instead. Bottom line: the game cannot run faster than 60 frames per second
3. Exceptions to the Intellivision constraints noted above:

- a. The use of non-Intellivision controllers is allowed; in particular, this means that modern console hand controllers can be used instead of the original Intellivision controllers
 - b. The size of the executable file need not conform to the parameters of an Intellivision. Obviously, a modern PC-based application will be far larger than 24K.
 - c. Games that play via network between two or more machines are allowed; thus, a game inspired by Utopia in which each player controls the entire screen and can swap between views of other islands would be allowed.
4. All games should include a title screen that appears as soon as Reset is pressed
 5. Finalists will be required to demonstrate live play of their games during the event; recordings of gameplay are not allowed.

Technical Specifications for Intellivision Reboots

Reboots must specifically name at least one existing Intellivision game that can be considered the “inspiration” for the new game. Games by publishers other than Mattel are allowed to be used for this purpose.

Reboots can be written using any development tools and can run on any platform as long as that platform can be used via videoconferencing to demonstrate gameplay during the live event.

Reboots will be evaluated as to how well they echo and enhance the gameplay of the original. In particular, emphasis will be given to games that are elegantly simple yet include gameplay that requires skill and practice to master. Gameplay is more important than visual content; a very pretty game with minimal or no gameplay will not be well regarded by the judges. Emphasis will also be given to games that can appeal to many age brackets. A game that is appealing and readily learned by young children and also adults will be viewed more favorably than one targeted at a narrow niche of hard-core gaming enthusiasts.