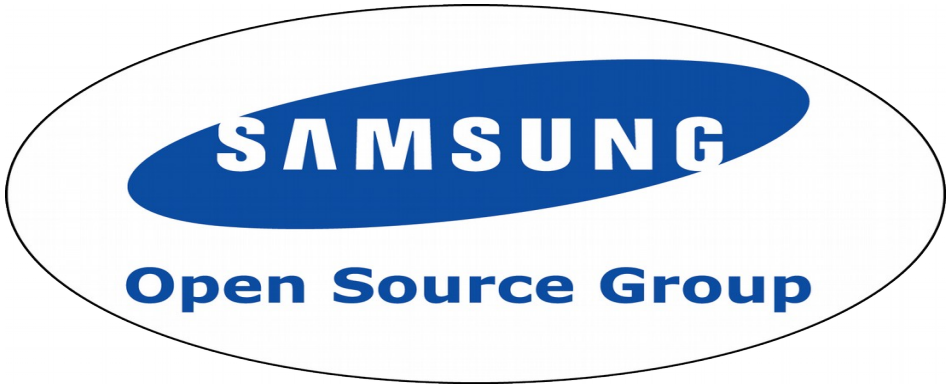

PAD identification

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Background

- The current media controller API lacks away to properly describe PADs;
  - Currently, a PAD Is identified by:
    - A flag (sink/source);
    - A PAD index.
  - On devices with multiple sinks and/or multiple sources, if the PAD index changes on a newer Kernel version, the ABI breaks.
  - There's no “ENUM_PADS” ioctl to help userspace to identify what each PAD actually means.
  - This works reasonably fine in the cases where all those multiple PADs carry the same signal type and are identified at the hardware level by an index, but this is not the case on certain types of entities (like tuners);

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Problems with this approach

- At userspace, when subdev API Isn't used, it is not clear what kind of signals is expected on each PAD;
- At kernelspace, the only way for a core routine to automatically create connections between entities is to hardcode the PAD indexes;
- Although the PAD index is currently part of uAPI/ABI, the headers with the PAD indexes are not at include/uapi.

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Proposal

- At Userspace: add a set of optional properties to describe the PAD.
  - One of such optional properties would be a PAD name;
  - We need the properties API pathset for that.
- At Kernelspace: for now, add PAD type to allow the Kernel to identify PADs with:
  - VBI, video, audio IF, video IF and I2S audio signals;

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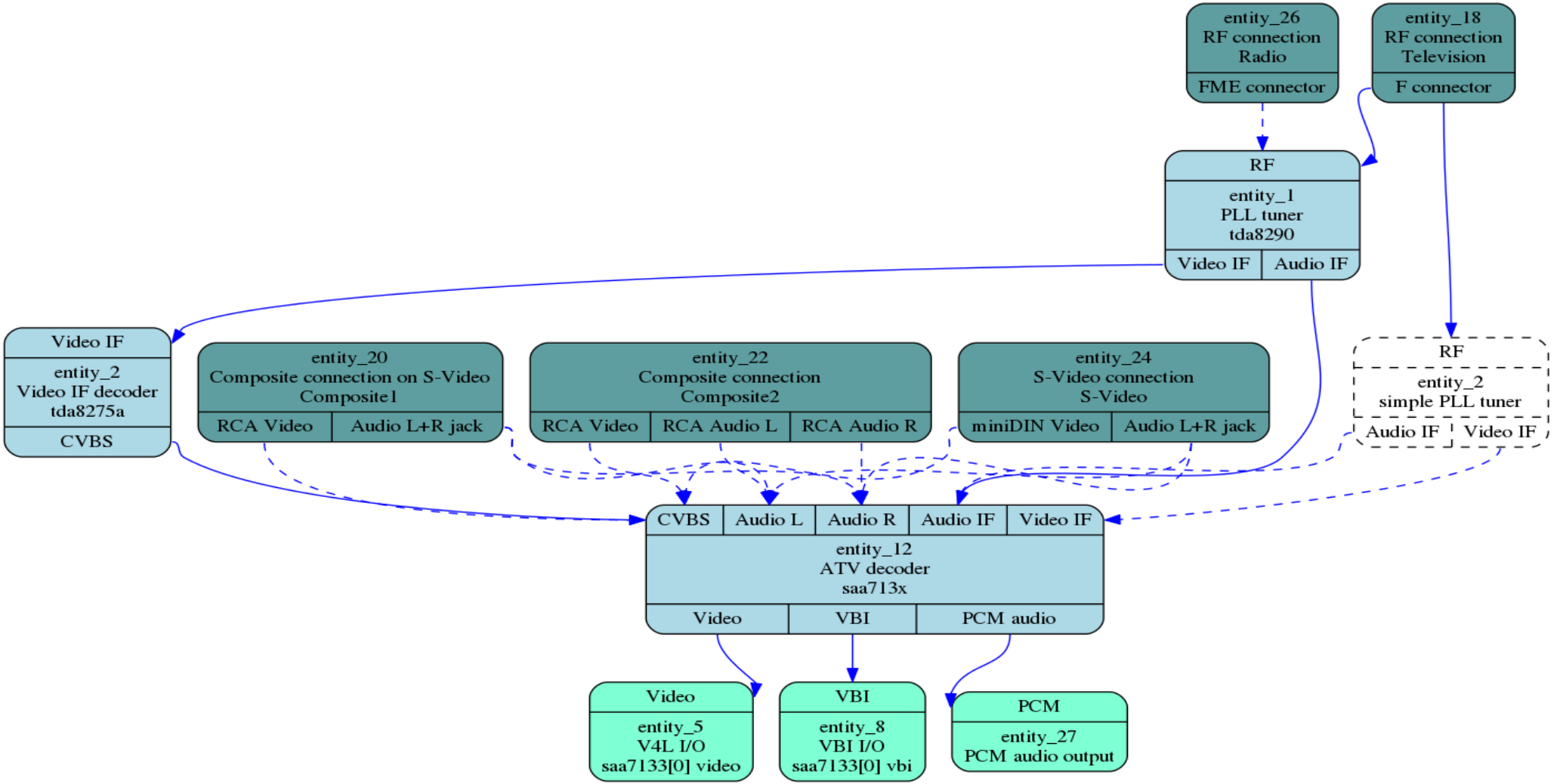
SAA 7134 example



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