Surface ACPI Notify

The Surface ACPI Notify (SAN) device provides the bridge between ACPI and SAM controller. Specifically, ACPI code can execute requests and handle battery and thermal events via this interface. In addition to this, events relating to the discrete GPU (dGPU) of the Surface Book 2 can be sent from ACPI code (note: the Surface Book 3 uses a different method for this). The only currently known event sent via this interface is a dGPU power-on notification. While this driver handles the former part internally, it only relays the dGPU events to any other driver interested via its public API and does not handle them.

The public interface of this driver is split into two parts: Client registration and notifier-block registration.

A client to the SAN interface can be linked as consumer to the SAN device via |san_client_link|. This can be used to ensure that the a client receiving dGPU events does not miss any events due to the SAN interface not being set up as this forces the client driver to unbind once the SAN driver is unbound.

Notifier-blocks can be registered by any device for as long as the module is loaded, regardless of being linked as client or not.

Registration is done with |san_dgpu_notifier_register|. If the notifier is not needed any more, it should be unregistered via |san_dgpu_notifier_unregister|.

Consult the API documentation below for more details.

API Documentation

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\driver-api\surface_aggregator\clients\(linux-master)(Documentation)(driver-api)(surface_aggregator)(clients)san.rst`, **line 41**)

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```
.. kernel-doc:: include/linux/surface_acpi_notify.h
```

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\driver-api\surface_aggregator\clients\(linux-master)(Documentation)(driver-api)(surface_aggregator)(clients)san.rst`, **line 43**)

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```
.. kernel-doc:: drivers/platform/surface/surface_acpi_notify.c
   :export:
```

Docutils System Messages

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\driver-api\surface_aggregator\clients\(linux-master)(Documentation)(driver-api)(surface_aggregator)(clients)san.rst`, **line 24**); *backlink*

Undefined substitution referenced: "san_client_link".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\driver-api\surface_aggregator\clients\(linux-master)(Documentation)(driver-api)(surface_aggregator)(clients)san.rst`, **line 30**); *backlink*

Undefined substitution referenced: "san_dgpu_notifier_register".

System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\driver-api\surface_aggregator\clients\(linux-master)(Documentation)(driver-api)(surface_aggregator)(clients)san.rst`, **line 30**); *backlink*

Undefined substitution referenced: "san_dgpu_notifier_unregister".