pegmatite SoC有如下regulator

```
regulators-mmap {
    compatible = "simple-bus";
    #address-cells = <2>;
    #size-cells = <2>;

    ranges;
    pegmatite_imgpipe_reg: pegmatite-regulator@1 {
        compatible = "pegmatite-reg";
        reg = <0 0xf9080008 0 0x160>;
        init-on = <1>;
        clocks = <&ipsbus_imaging_clkgate>, <&scan_clkgate>, <&lvds_afe_clkgate>, <&nss_imaging_clkgate>;
        regulator-name = "pegmatite_imgpipe";
        dev-name = "img_pipe";
        supply-name = "islandpower";
    };
    pegmatite_gpu_reg: pegmatite-regulator@2 {
        compatible = "pegmatite-reg";
        reg = <0 0xd0630030 0 0x8>;
        init-on = <1>;
        clocks = <&apbus_gpu_clkgate>, <&gpubus_clkgate>, <&gpu_clkgate>;
        regulator-name = "pegmatite_gpu";
        dev-name = "gpu";
        supply-name = "islandpower";
    };
    pegmatite_upc_reg: pegmatite-regulator@3 {
        compatible = "pegmatite-reg";
        reg = <0 0xf9080000 0 0x8>;
        init-on = <1>;
        clocks = <&ipsbus_upc_clkgate>, <&xio_clkgate>, <&xcpu_clkgate>;
        regulator-name = "pegmatite_upc";
        dev-name = "upc0";
        supply-name = "islandpower";
    };
};
```

即分别是"pegmatite_imgpipe"，"pegmatite_gpu"，"pegmatite_upc" 3个regulators.

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imagepower_drvr.dev是regulator consumer的device.

```
imagepower_drvr.dev = device_create(imagepower_drvr.Class, NULL, MKDEV(imagepower_drvr.Major, 1),
                        NULL, "imagepower");
```

获取"pegmatite_imgpipe" regulator的handle.

```c
static struct regulator *img_regulator = 0;

img_regulator = regulator_get(imagepower_drvr.dev, "pegmatite_imgpipe");
```

获得了regulator handle，就可以使用了

打开power

```c
if (img_regulator && !regulator_enable( img_regulator )) {
    //printk(KERN_ERR "Imagepower enabled image regulator %p\n", img_regulator);
    retval = 0;
} else {
    printk(KERN_ERR "Imagepower can't enable image regulator %p\n", img_regulator);
}
```

关闭power

```c
struct regulator *r = filep->private_data;
if (r) {
    regulator_disable(r);
    filep->private_data = 0;
}
```

另外与regulator_get()对应的

> regulator_put(img_regulator);

---

upc使用regulator

create "pegmatite_upc" regulator consumer device

```c
dev_data->dev = device_create(upc_object.upc_class, NULL,
                    MKDEV(upc_object.upc_major, dev_data->dragonite_num),
                    NULL, "upc%u", dev_data->dragonite_num);
```

获取regulator handle

> upc_object.upc_suspend_context.power = regulator_get(dev_data->dev, "pegmatite_upc");

enable regulator

```c
struct regulator *r = upc_object.upc_suspend_context.power;

if (regulator_enable( r ))
    printk(KERN_ERR "can't enable upc regulator \n");
```

disable regulator

`regulator_disable()`

`regulator_force_disable()`

```c
struct regulator *r = upc_object.upc_suspend_context.power;

// power off island
if ( r && regulator_is_enabled( r ) )
    if (regulator_disable( r ))
        regulator_force_disable(r);
```

free regulator handle

> regulator_put(upc_object.upc_suspend_context.power);