KBA-180202011253

[Description]: how to support float charger.

[Platform]:msm8953

how to support float charger

```
--- a/arch/arm/boot/dts/qcom/msm-pmi8950.dtsi

+++ b/arch/arm/boot/dts/qcom/msm-pmi8950.dtsi

@@ -210,6 +210,7 @@

qcom,force-aicl-rerun;

qcom,aicl-rerun-period-s = <180>;

qcom,autoadjust-vfloat;

+ qcom,override-usb-current;

qcom,chgr@1000 {

reg = <0x1000 0x100>;

--- a/drivers/usb/dwc3/dwc3-msm.c

+++ b/drivers/usb/dwc3/dwc3-msm.c

@@ -238,6 +238,8 @@ struct dwc3_msm {

atomic_t in_p3;

unsigned int lpm_to_suspend_delay;

bool init;

+ bool is_first_chg_hrtimer;

+ struct hrtimer chg_hrtimer;

};

#define USB_HSPHY_3P3_VOL_MIN 3050000 /* uV */

@@ -1750,6 +1752,8 @@ static void dwc3_msm_notify_event(struct dwc3 *dwc, unsigned event,
PWR_EVNT_LPM_OUT_L1_MASK, 1);

atomic_set(&dwc->in_lpm, 0);

+ pr_debug("%s():cancel HRTIMER\n", __func__);

+ hrtimer_cancel(&mdwc->chg_hrtimer);

break;

case DWC3_CONTROLLER_NOTIFY_OTG_EVENT:

dev_dbg(mdwc->dev, "DWC3_CONTROLLER_NOTIFY_OTG_EVENT received\n");

@@ -2201,6 +2205,8 @@ static void dwc3_ext_event_notify(struct dwc3_msm *mdwc)

} else {

dev_dbg(mdwc->dev, "XCVR: BSV clear\n");

clear_bit(B_SESS_VLD, &mdwc->inputs);

+ pr_debug("%s(): cancel HRTIMER\n", __func__);

+ hrtimer_cancel(&mdwc->chg_hrtimer);

}

if (mdwc->suspend) {

@@ -2481,6 +2487,8 @@ static int dwc3_msm_power_set_property_usb(struct power_supply *psy
,

switch (psy->type) {

case POWER_SUPPLY_TYPE_USB:

mdwc->chg_type = DWC3_SDP_CHARGER;

+ pr_debug("%s(): start hrtimer\n", __func__);

+ hrtimer_start(&mdwc->chg_hrtimer, ktime_set(1, 0), HRTIMER_MODE_REL);

break;

case POWER_SUPPLY_TYPE_USB_DCP:
```

```
mdwc->chg_type = DWC3_DCP_CHARGER;
@@ -2675,6 +2683,31 @@ static int dwc3_msm_get_clk_gdsc(struct dwc3_msm *mdwc)
return 0;
}
+static enum hrtimer_restart chg_hrtimer_func(struct hrtimer *hrtimer)
+{
+ struct power_supply *usb_psy;
+ const union power_supply_propval ret = {500000,};
+ struct dwc3_msm *mdwc = container_of(hrtimer, struct dwc3_msm,chg_hrtimer);
+
+ pr_debug("%s(): Inside timer expired. DO floating charger update!\n", __func__);
+
+ usb_psy = power_supply_get_by_name("usb");
+ if (!usb_psy) {
+ pr_err("usb supply not found!\n");
+ } else {
+ dwc3_msm_power_set_property_usb(usb_psy,POWER_SUPPLY_PROP_CURRENT_MAX, &ret)
;
+ }
+
+ if(!mdwc->is_first_chg_hrtimer) {
+ dwc3_msm_gadget_vbus_draw(mdwc, 500);
+ mdwc->is_first_chg_hrtimer = true;
+ }
+ else
+ dwc3_msm_gadget_vbus_draw(mdwc, 1500);
+
+ return HRTIMER_NORESTART;
+}
+
static int dwc3_msm_probe(struct platform_device *pdev)
{
struct device_node *node = pdev->dev.of_node, *dwc3_node;
@@ -3028,6 +3061,9 @@ static int dwc3_msm_probe(struct platform_device *pdev)
if (of_property_read_bool(node, "qcom,disable-dev-mode-pm"))
pm_runtime_get_noresume(mdwc->dev);
+ hrtimer_init(&mdwc->chg_hrtimer, CLOCK_MONOTONIC, HRTIMER_MODE_ABS);
+ mdwc->chg_hrtimer.function = chg_hrtimer_func;
+
/* Update initial ID state */
if (mdwc->pmic_id_irq) {
enable_irq(mdwc->pmic_id_irq);
```