Question:How do quick charger and PD detected?

Answer:

The detection is done on SMB side, the work flow is like below:

Candidate	Voter
pd_allowed_votable	PD_DISALLOWED_INDIRECT_VOTER PD_VOTER
pd_disallowed_votable_indirect	CC_DETACHED_VOTER HVDCP_TIMEOUT_VOTER LEGACY_CABLE_VOTER VBUS_CC_SHORT_VOTER

[1] Disable PD negotiation by default when the Type-C cable is removed

@smb-lib.c

```
static void smblib_handle_typec_removal(struct smb_charger *chg)
{
vote(chg->pd_disallowed_votable_indirect, CC_DETACHED_VOTER, true, 0);
vote(chg->pd_disallowed_votable_indirect, HVDCP_TIMEOUT_VOTER, true, 0);
vote(chg->pd_disallowed_votable_indirect, LEGACY_CABLE_VOTER, true, 0);
vote(chg->pd_disallowed_votable_indirect, VBUS_CC_SHORT_VOTER, true, 0);
... }
```

[2] Enable PD negotiation when the Type-C cable is inserted and HVDCP detection timeout

@smb-lib.c

```
static void smblib_handle_hvdcp_check_timeout(struct smb_charger *chg, bool rising, bool
qc_charger)
{
/* Hold off PD only until hvdcp 2.0 detection timeout */
if (rising) {
vote(chg->pd_disallowed_votable_indirect, HVDCP_TIMEOUT_VOTER, false, 0);
... }
... }
```

[3] PD negotiation works now

@smb-lib.c

```
int smblib_get_prop_pd_allowed(struct smb_charger *chg, union power_supply_propval *val)
{
val->intval = get_effective_result(chg->pd_allowed_votable);
return 0;
}
```

@smb-lib.c

```
int smblib_get_pe_start(struct smb_charger *chg, union power_supply_propval *val)
{
```

```
/*
* hvdcp timeout voter is the last one to allow pd. Use its vote
* to indicate start of pe engine
*/
val->intval = !get_client_vote_locked(chg->pd_disallowed_votable_indirect,
HVDCP_TIMEOUT_VOTER);
return 0;
}
@policy_engine.c
static int psy_changed(struct notifier_block *nb, unsigned long evt, void *ptr)
{
... ret = power_supply_get_property(pd->usb_psy, POWER_SUPPLY_PROP_PE_START, &val);
... /* Don't proceed if PE_START=0 as other props may still change */
if (!val.intval && !pd->pd_connected &&
typec_mode != POWER_SUPPLY_TYPEC_NONE)
return 0;
... }
```

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