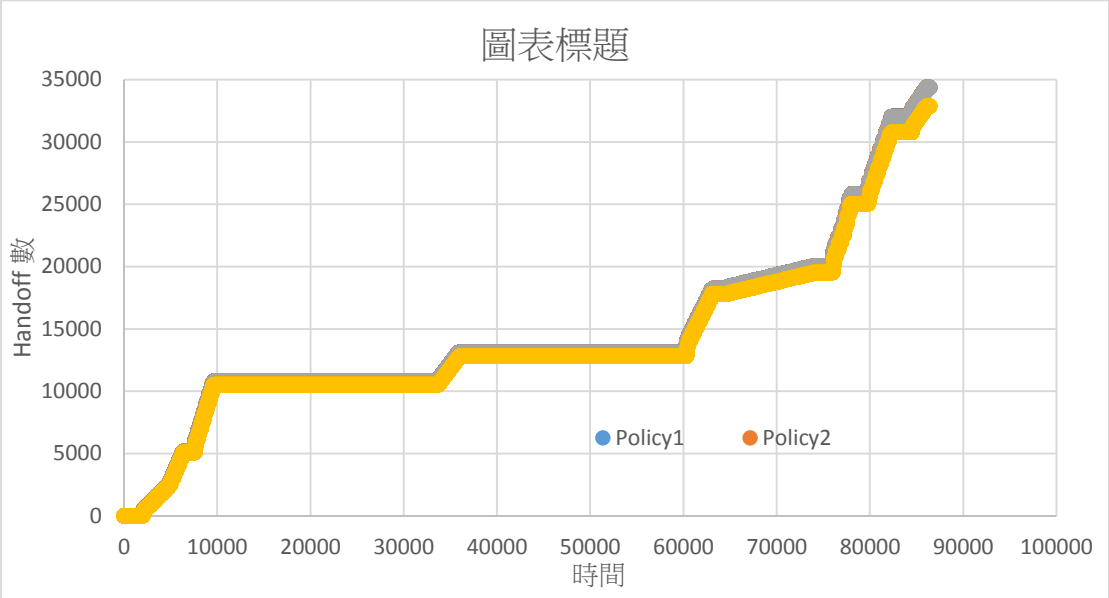
圖表



灰色為 Policy1,policy2,policy3 重疊之線　　黃色為 my policy

Policy1 平均 power: -122.632

Policy2 平均 power: -123.561

Policy3 平均 power: -123.389

My Policy 平均 power: -124.472

Source code

Policy1:

```
void solution1(){
	double a;
	for(int i=0;i<count;i++){
		if(data[i].bs1==1){
			a=data[i].strength1;
			if(a<data[i].strength2){
				a=data[i].strength2;
				data[i].bs1=2;
			}
			if(a<data[i].strength3){
				a=data[i].strength3;
				data[i].bs1=3;
			}
			if(a<data[i].strength4){
				a=data[i].strength4;
				data[i].bs1=4;
			}
```

```
        if(data[i].bs1!=1){
                handoff1++;
        }
}
else if(data[i].bs1==2){
        a=data[i].strength2;
        if(a<data[i].strength1){
                a=data[i].strength1;
                data[i].bs1=1;
        }
        if(a<data[i].strength3){
                a=data[i].strength3;
                data[i].bs1=3;
        }
        if(a<data[i].strength4){
                a=data[i].strength4;
                data[i].bs1=4;
        }
        if(data[i].bs1!=2){
                handoff1++;
        }
}

else if(data[i].bs1==3){
        a=data[i].strength3;
        if(a<data[i].strength2){
                a=data[i].strength2;
                data[i].bs1=2;
        }
        if(a<data[i].strength1){
                a=data[i].strength1;
                data[i].bs1=1;
        }
        if(a<data[i].strength4){
                a=data[i].strength4;
                data[i].bs1=4;
        }
        if(data[i].bs1!=3){
                handoff1++;
        }
}

else{
        a=data[i].strength4;
        if(a<data[i].strength2){
                a=data[i].strength2;
```

```
                    data[i].bs1=2;
                }
                if(a<data[i].strength3){
                    a=data[i].strength3;
                    data[i].bs1=3;
                }
                if(a<data[i].strength1){
                    a=data[i].strength1;
                    data[i].bs1=1;
                }
                if(data[i].bs1!=4){
                    handoff1++;
                }
            }
        }
}
```

Policy2

```
void solution2(){
        double a;
        for(int i=0;i<count;i++){
            if(data[i].bs2==1&&data[i].strength1<(-110)){
                a=data[i].strength1;
                if(a<data[i].strength2){
                    a=data[i].strength2;
                    data[i].bs2=2;
                }
                if(a<data[i].strength3){
                    a=data[i].strength3;
                    data[i].bs2=3;
                }
                if(a<data[i].strength4){
                    a=data[i].strength4;
                    data[i].bs2=4;
                }
                if(data[i].bs2!=1){
                    handoff2++;
                }
            }
            else if(data[i].bs2==2&&data[i].strength2<(-110)){
                a=data[i].strength2;
                if(a<data[i].strength1){
                    a=data[i].strength1;
                    data[i].bs2=1;
                }
                if(a<data[i].strength3){
```

```
            a=data[i].strength3;
            data[i].bs2=3;
        }
        if(a<data[i].strength4){
            a=data[i].strength4;
            data[i].bs2=4;
        }
        if(data[i].bs2!=2){
            handoff2++;
        }
    }

    else if(data[i].bs2==3&&data[i].strength3<(-110)){
        a=data[i].strength3;
        if(a<data[i].strength2){
            a=data[i].strength2;
            data[i].bs2=2;
        }
        if(a<data[i].strength1){
            a=data[i].strength1;
            data[i].bs2=1;
        }
        if(a<data[i].strength4){
            a=data[i].strength4;
            data[i].bs2=4;
        }
        if(data[i].bs2!=3){
            handoff2++;
        }
    }

    else if(data[i].bs2==4&&data[i].strength4<(-110)){
        a=data[i].strength4;
        if(a<data[i].strength2){
            a=data[i].strength2;
            data[i].bs2=2;
        }
        if(a<data[i].strength3){
            a=data[i].strength3;
            data[i].bs2=3;
        }
        if(a<data[i].strength1){
            a=data[i].strength1;
            data[i].bs2=1;
        }
        if(data[i].bs2!=4){
```

```
                handoff2++;
            }
        }
    }
}
```

Policy3

```
void solution3(){
    double a;
    for(int i=0;i<count;i++){
        if(data[i].bs3==1){
            a=data[i].strength1;
            if(a<(data[i].strength2-5)){
                a=data[i].strength2;
                data[i].bs3=2;
            }
            if(a<(data[i].strength3-5)){
                a=data[i].strength3;
                data[i].bs3=3;
            }
            if(a<(data[i].strength4-5)){
                a=data[i].strength4;
                data[i].bs3=4;
            }
            if(data[i].bs3!=1){
                handoff3++;
            }
        }
        else if(data[i].bs3==2){
            a=data[i].strength2;
            if(a<(data[i].strength1-5)){
                a=data[i].strength1;
                data[i].bs3=1;
            }
            if(a<(data[i].strength3-5)){
                a=data[i].strength3;
                data[i].bs3=3;
            }
            if(a<(data[i].strength4-5)){
                a=data[i].strength4;
                data[i].bs3=4;
            }
            if(data[i].bs3!=2){
                handoff3++;
            }
        }
```

```
            else if(data[i].bs3==3){
                a=data[i].strength3;
                if(a<(data[i].strength1-5)){
                    a=data[i].strength1;
                    data[i].bs3=1;
                }
                if(a<(data[i].strength2-5)){
                    a=data[i].strength2;
                    data[i].bs3=2;
                }
                if(a<(data[i].strength4-5)){
                    a=data[i].strength4;
                    data[i].bs3=4;
                }
                if(data[i].bs3!=3){
                    handoff3++;
                }
            }
            else{
                a=data[i].strength4;
                if(a<(data[i].strength1-5)){
                    a=data[i].strength1;
                    data[i].bs3=1;
                }
                if(a<(data[i].strength2-5)){
                    a=data[i].strength2;
                    data[i].bs3=2;
                }
                if(a<(data[i].strength3-5)){
                    a=data[i].strength3;
                    data[i].bs3=3;
                }
                if(data[i].bs3!=4){
                    handoff3++;
                }
            }
        }
}
```

My Policy

```
void solution4(){
    double a;
    for(int i=0;i<count;i++){
        if(data[i].bs4==1){
            if(data[i].strength1<(-125)){
                a=data[i].strength2;
```

```
                data[i].bs4=2;
                if(a<data[i].strength3){
                        a=data[i].strength3;
                        data[i].bs4=3;
                }
                if(a<data[i].strength4){
                        data[i].bs4=4;
                }
                handoff4++;
        }
}
else if(data[i].bs4==2){
        if(data[i].strength2<(-125)){
                a=data[i].strength1;
                data[i].bs4=1;
                if(a<data[i].strength3){
                        a=data[i].strength3;
                        data[i].bs4=3;
                }
                if(a<data[i].strength4){
                        data[i].bs4=4;
                }
                handoff4++;
        }
}
else if(data[i].bs4==3){
        if(data[i].strength3<(-125)){
                a=data[i].strength1;
                data[i].bs4=1;
                if(a<data[i].strength2){
                        a=data[i].strength2;
                        data[i].bs4=2;
                }
                if(a<data[i].strength4){
                        data[i].bs4=4;
                }
                handoff4++;
        }
}
else{
        if(data[i].strength4<(-125)){
                a=data[i].strength1;
                data[i].bs4=1;
                if(a<data[i].strength3){
                        a=data[i].strength3;
                        data[i].bs4=3;
```

```
                    }
                    if(a<data[i].strength2){
                        data[i].bs4=2;
                    }
                    handoff4++;
                }
            }
        }
}
```

Introduction to your policy

標記紅色之部分為四個 policy 主要的差別，亦為判斷是否 handoff 的部分

Policy1: data[i].strength1<data[i].strength2

Policy2: data[i].bs2==1&&data[i].strength1<(-110)

Policy3: data[i].strength1<(data[i].strength2-5)

Policy4: data[i].strength1<(-125)

我的 policy 是如果小於最小值-125，才會換新的基地台，好處是 handoff 數會減少，壞處則是平均訊號比其他差