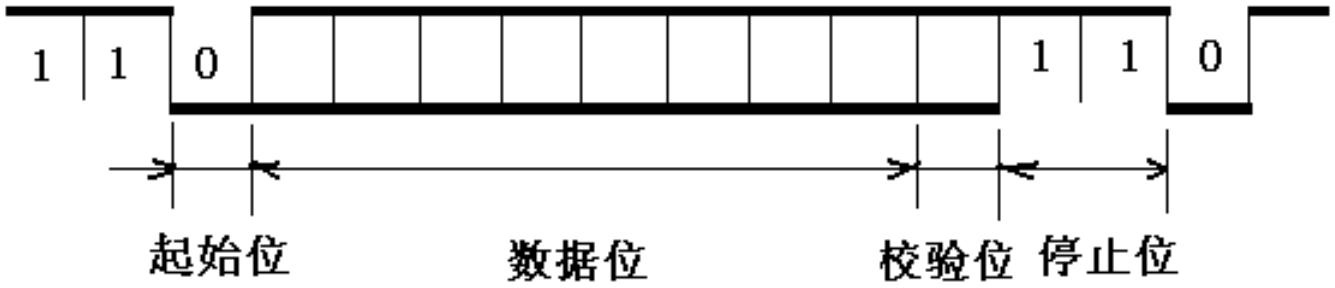
2020

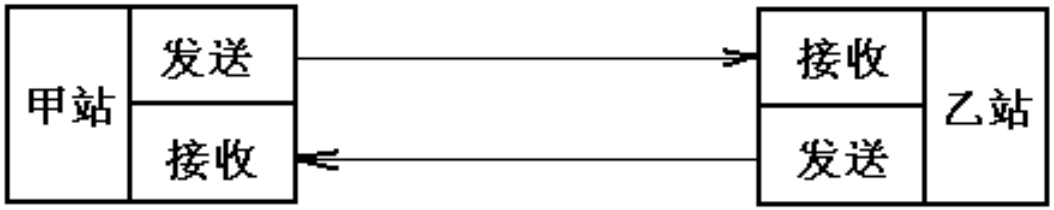
PLC通信基础,学习PLC通信

SIMATIC S7

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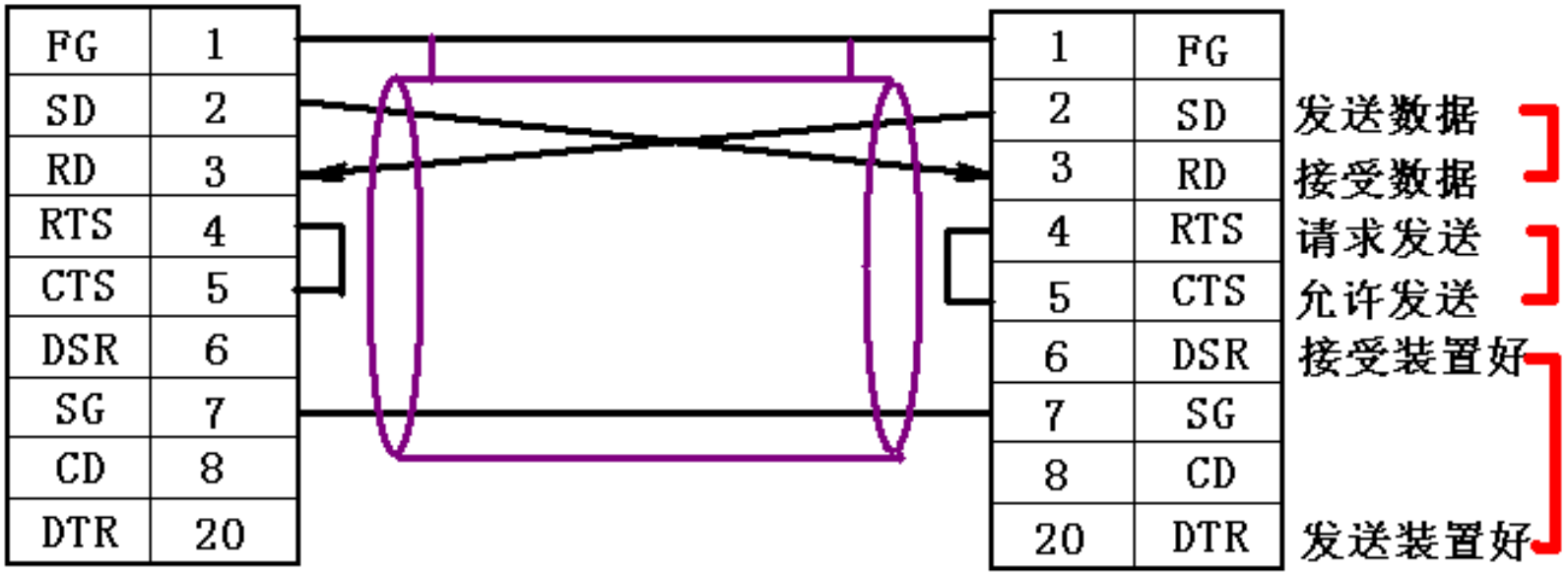
全双工方式



半双工方式

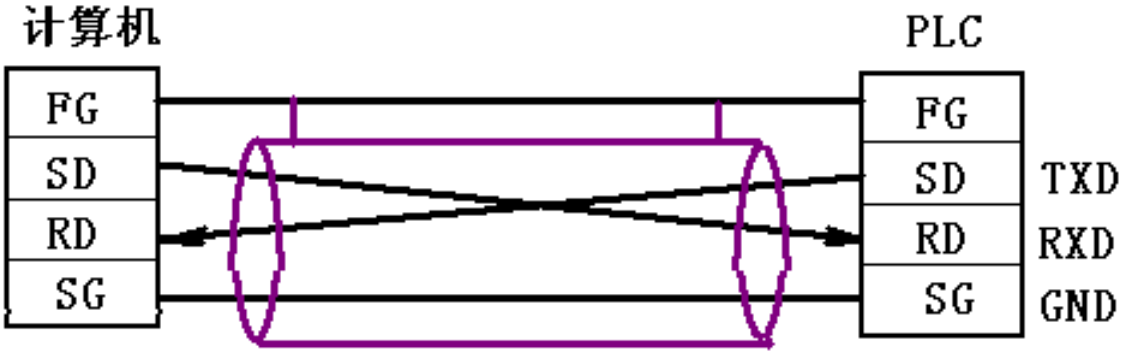
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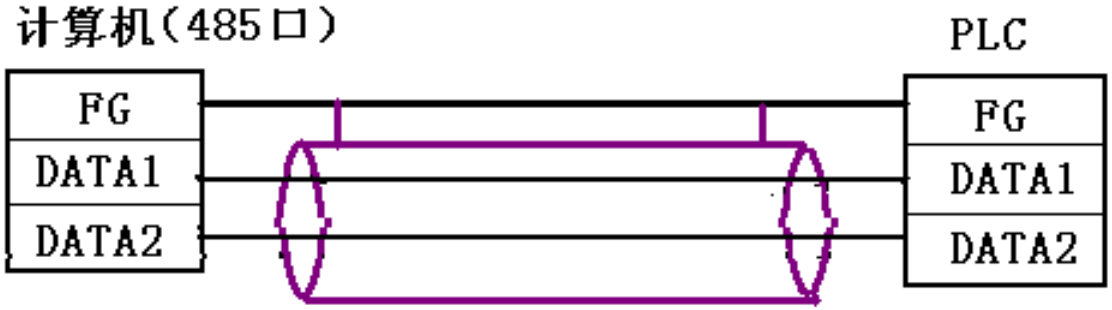
RS-232C无握手信号

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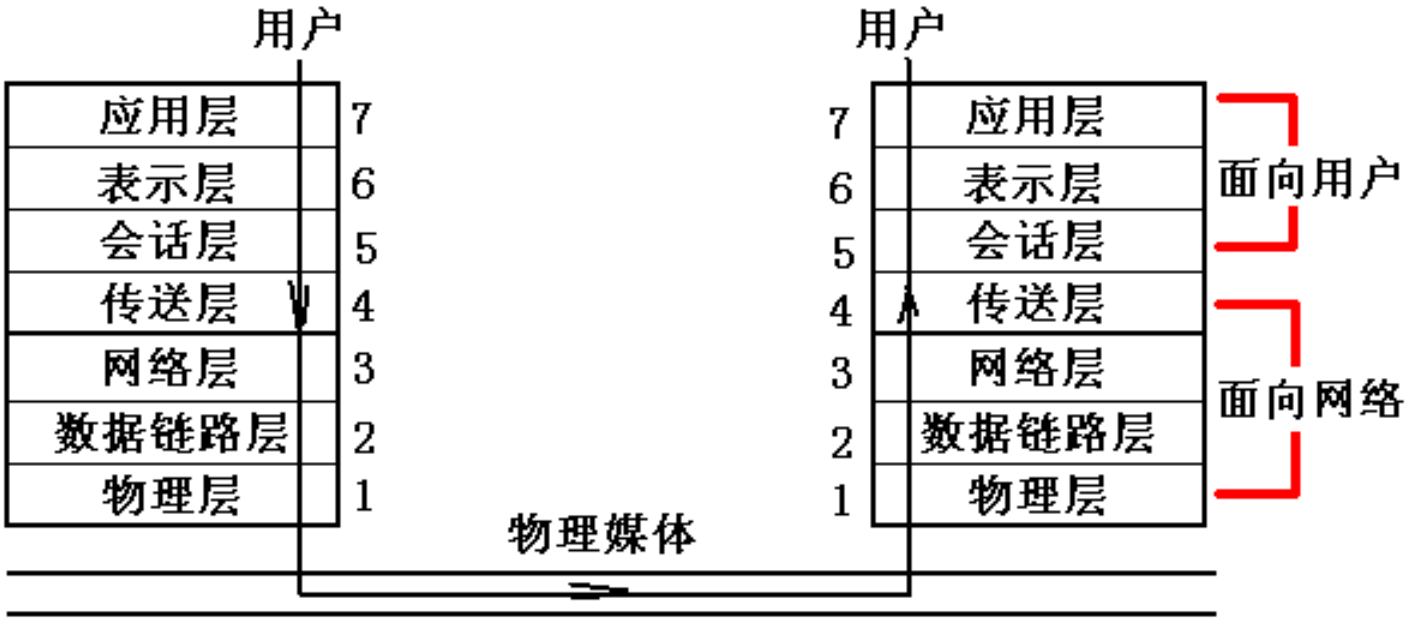
RS-422 信号连接

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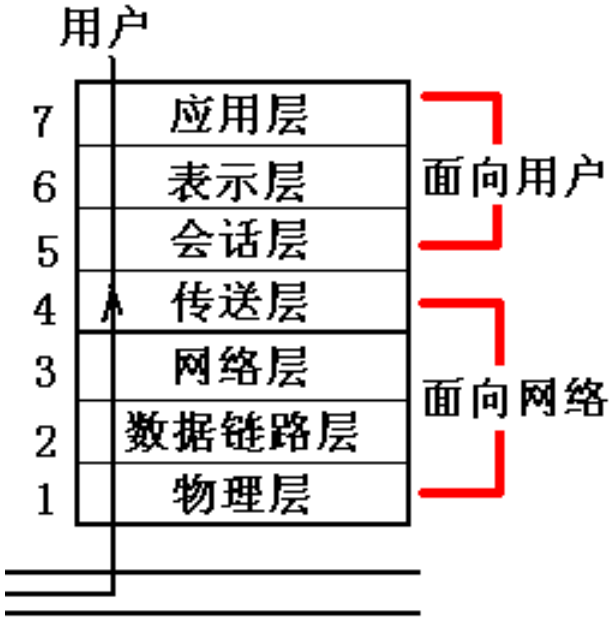
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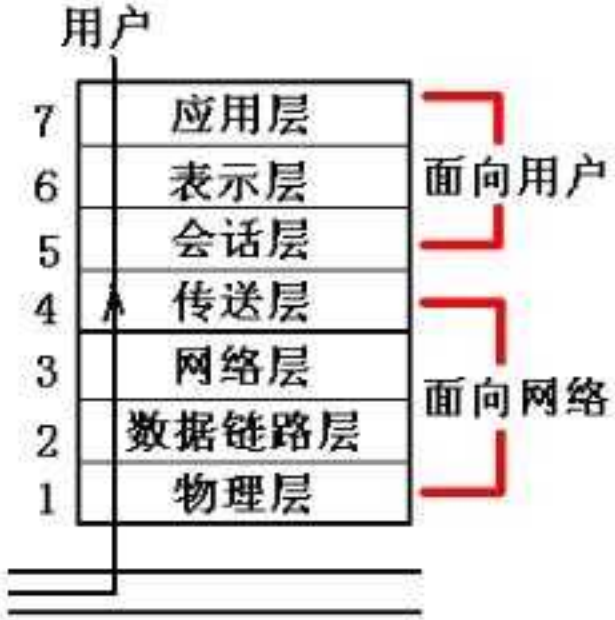


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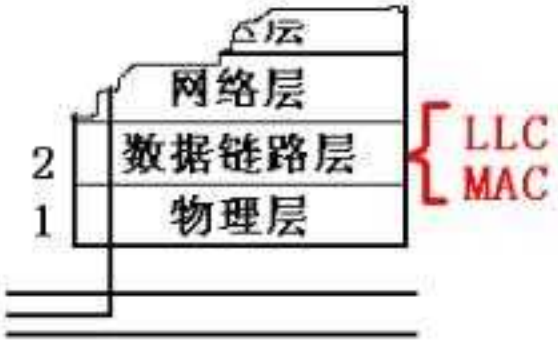


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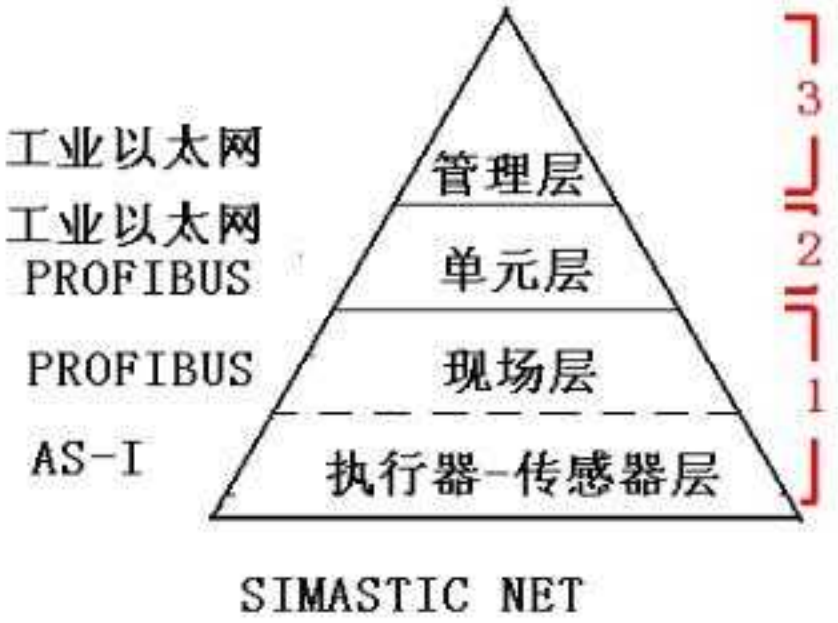
带冲突检测的载波侦听多路访问技术

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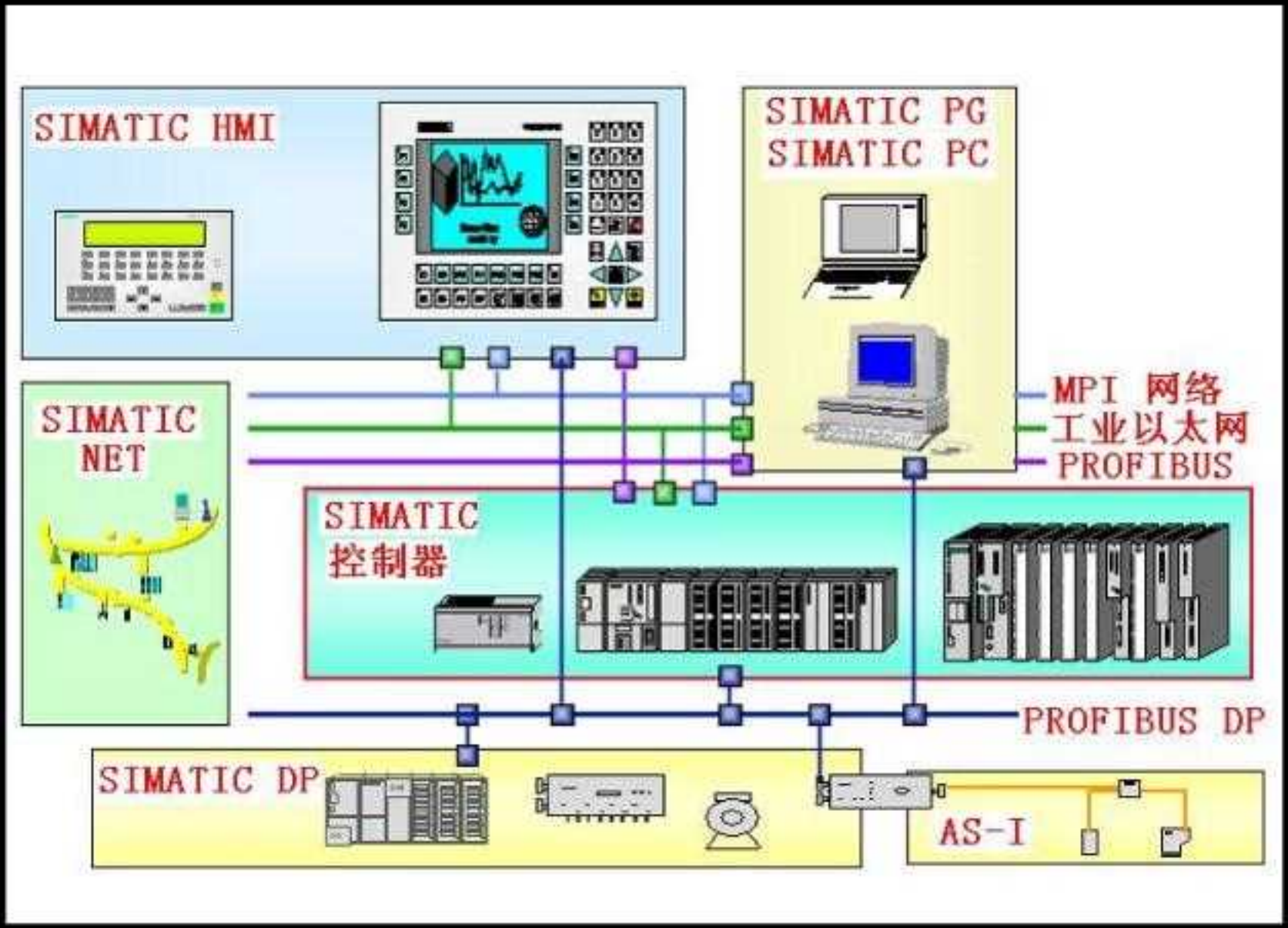




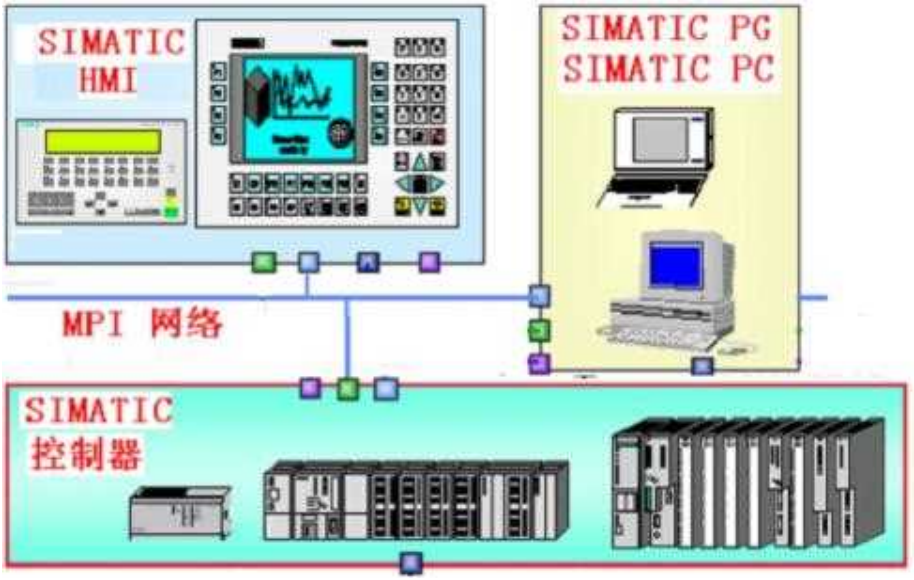
SIMASTIC NET

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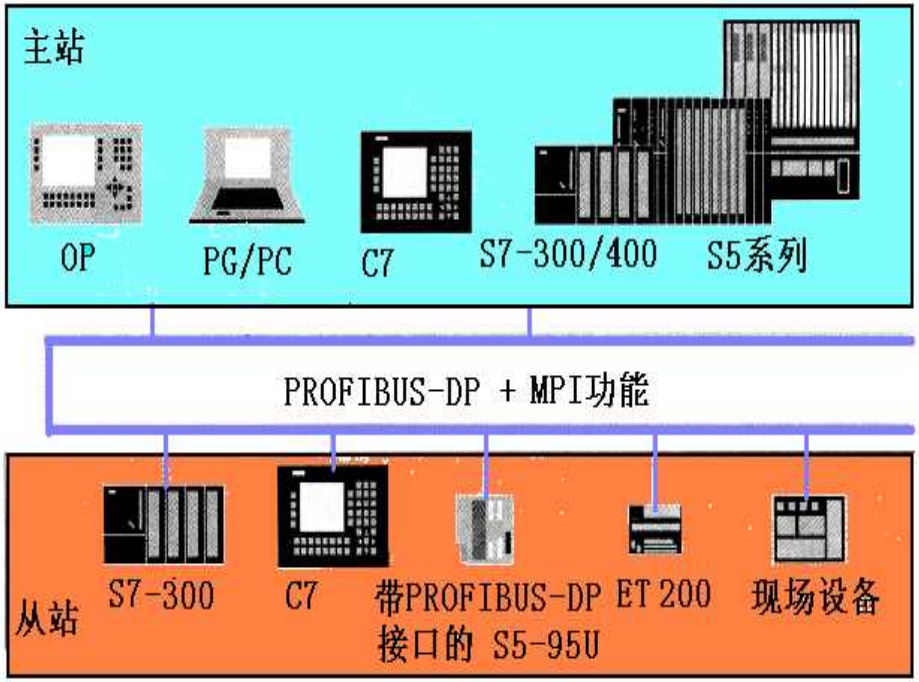
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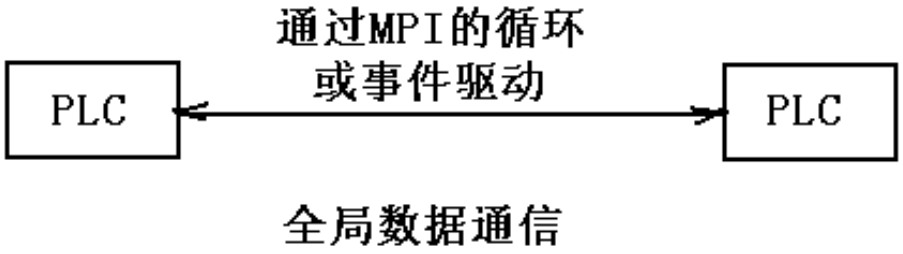
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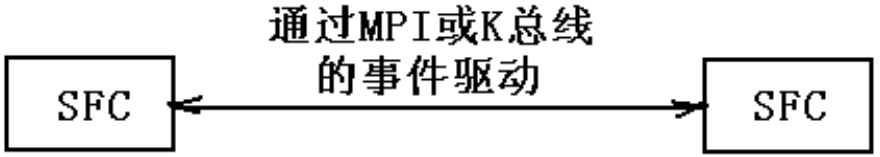


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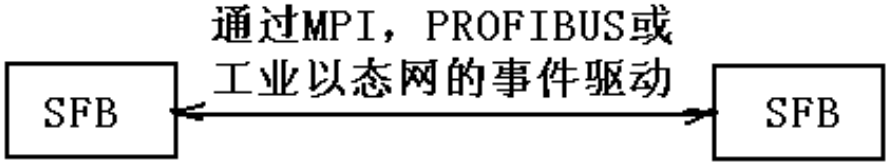




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基本通信（非配置的连接）



扩展通信（配置的连接）

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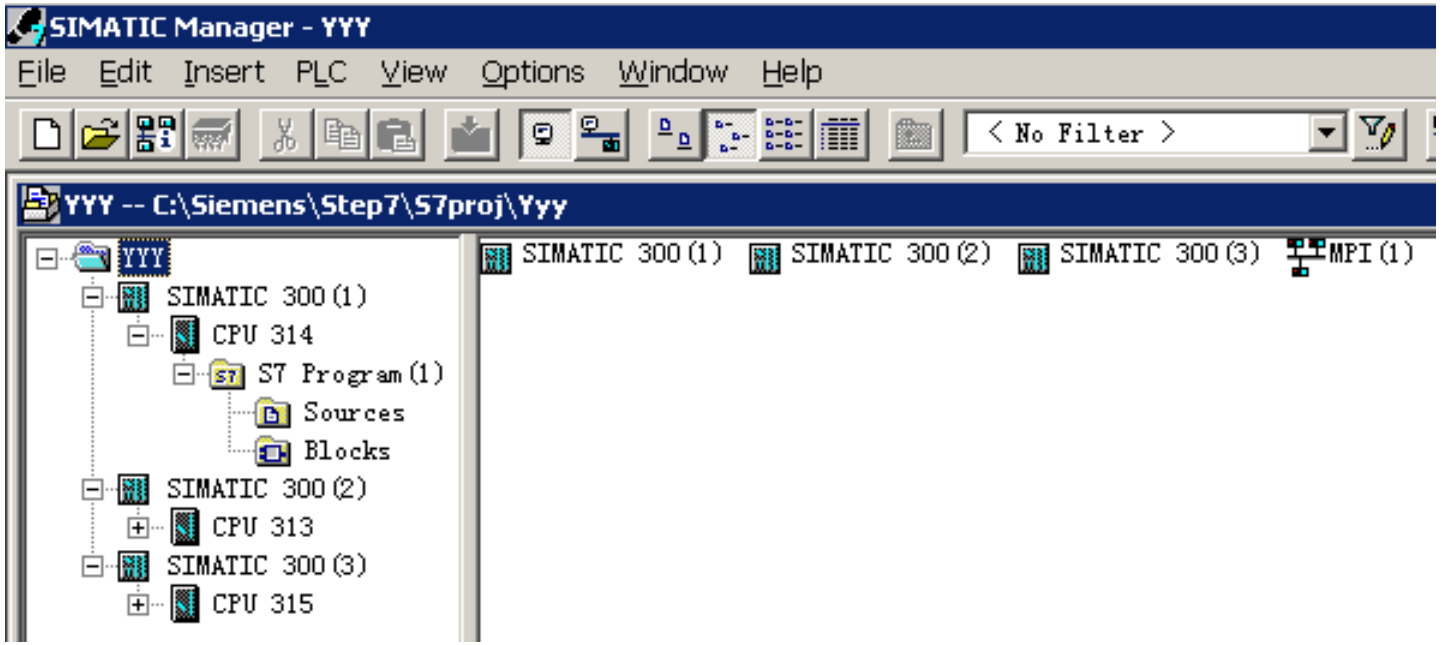


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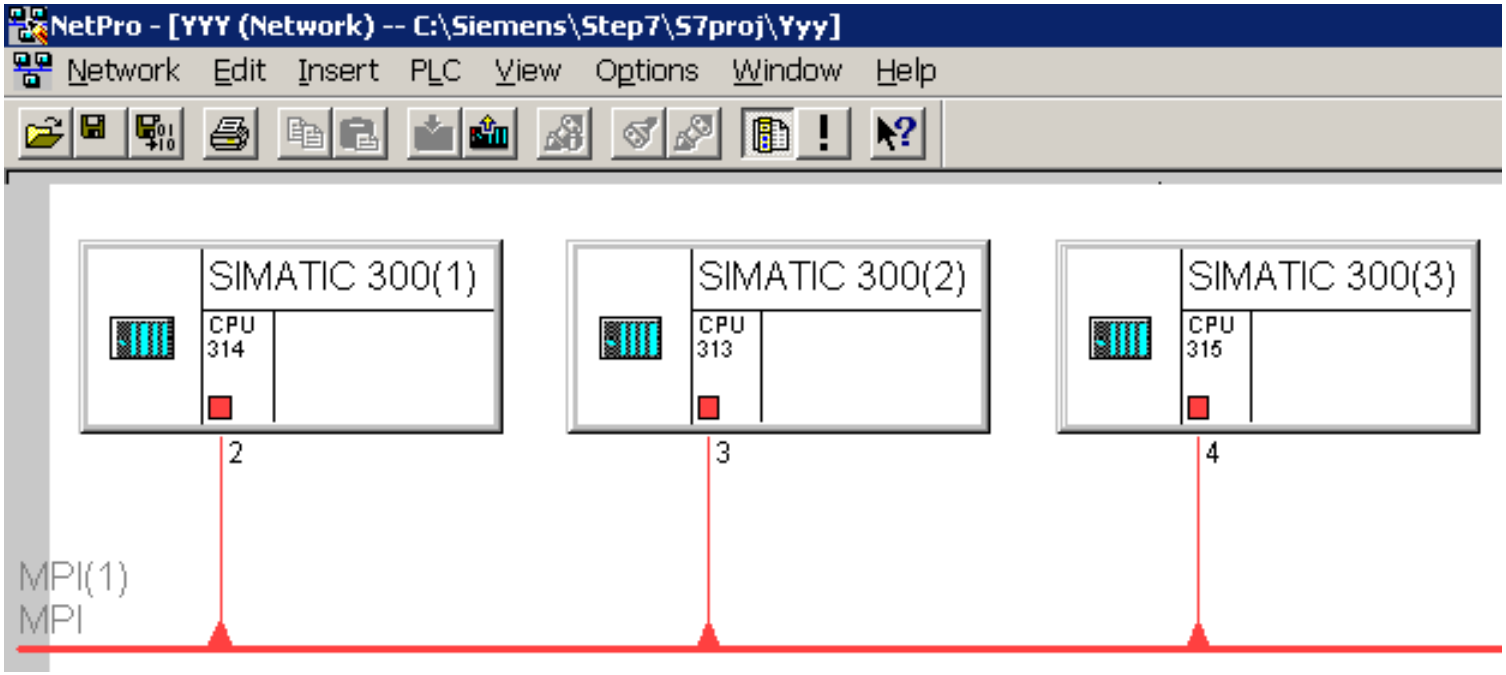


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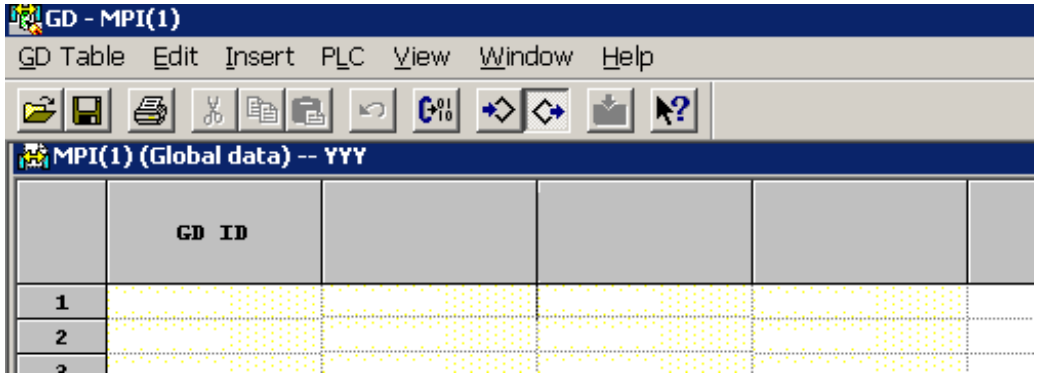


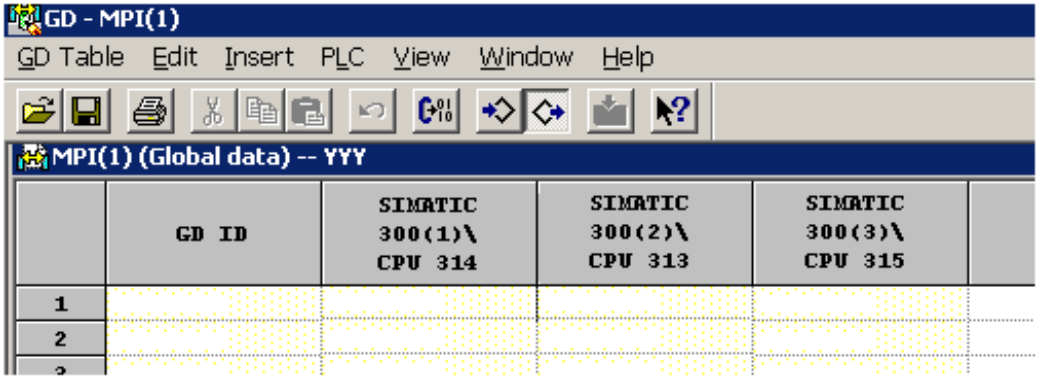


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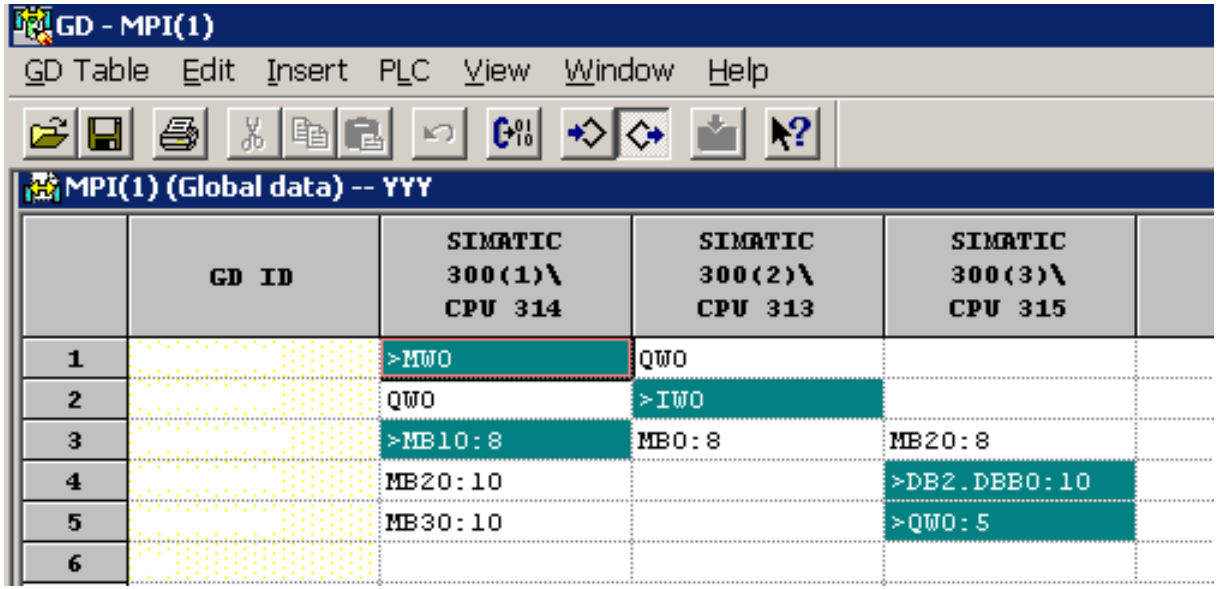


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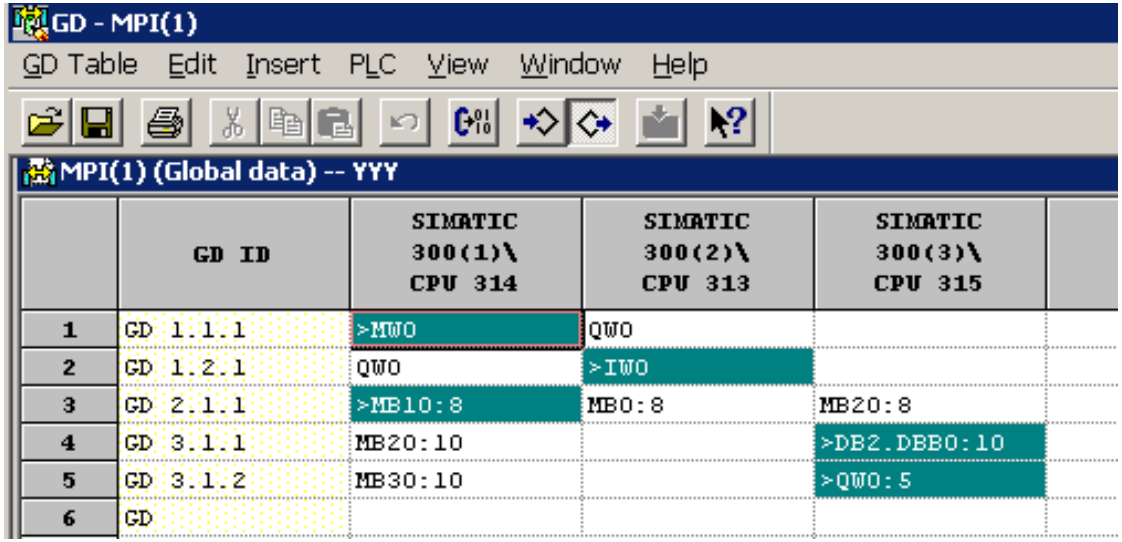


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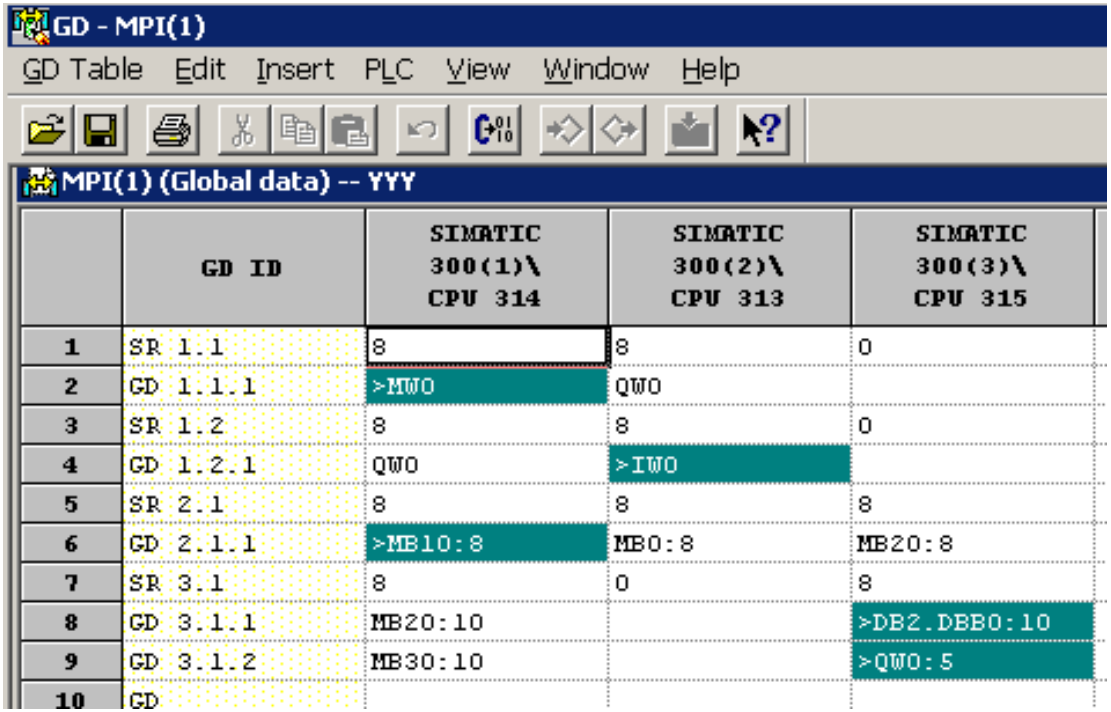
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1		>MW0	QW0		
2		QW0	>IW0		
3		>MB10:8	MB0:8	MB20:8	
4		MB20:10		>DB2.DBB0:10	
5		MB30:10		>QW0:5	
6					

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	GD ID	SIMATIC 300(1)\ CPU 314	SIMATIC 300(2)\ CPU 313	SIMATIC 300(3)\ CPU 315	
1	GD 1.1.1	>MW0	QW0		
2	GD 1.2.1	QW0	>IW0		
3	GD 2.1.1	>MB10:8	MB0:8	MB20:8	
4	GD 3.1.1	MB20:10		>DB2.DBB0:10	
5	GD 3.1.2	MB30:10		>QW0:5	
6	GD				

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	GD ID	SIMATIC 300(1)\ CPU 314	SIMATIC 300(2)\ CPU 313	SIMATIC 300(3)\ CPU 315
1	SR 1.1	8	8	0
2	GD 1.1.1	>MW0	QW0	
3	SR 1.2	8	8	0
4	GD 1.2.1	QW0	>IW0	
5	SR 2.1	8	8	8
6	GD 2.1.1	>MB10:8	MB0:8	MB20:8
7	SR 3.1	8	0	8
8	GD 3.1.1	MB20:10		>DB2.DBB0:10
9	GD 3.1.2	MB30:10		>QW0:5
10	GD			

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GD - MPI(1)

GD Table Edit Insert PLC View Window Help

MPI(1) (Global data) -- YYY

	GD ID	SIMATIC 300(1)\ CPU 314	SIMATIC 300(2)\ CPU 313	SIMATIC 300(3)\ CPU 315
1	GST			
2	GDS 1.1			
3	SR 1.1	8	8	0
4	GD 1.1.1	>MW0	QW0	
5	GDS 1.2			
6	SR 1.2	8	8	0
7	GD 1.2.1	QW0	>IW0	
8	GDS 2.1			
9	SR 2.1	8	8	8
10	GD 2.1.1	>MB10:8	MB0:8	MB20:8
11	GDS 3.1			
12	SR 3.1	8	0	8
13	GD 3.1.1	MB20:10		>DB2.DBB0:10
14	GD 3.1.2	MB30:10		>QW0:5

图中还没有给状态双字赋于地址。

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SIEMENS

SFC 60

SFC 61

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```
Network 1: Title:
   CALL  "DIS_AIRT"      //调用SFC41延迟处理高优先级中断
    RET_VAL:=MW100       //返回的数掌信息

Network 2: Title:
   CALL  "GD_SND"        //调用SFC60发送全局数据
    CIRCLE_ID:=B#16#3    //GD环编号（1~16）
    BLOCK_ID :=B#16#1    //GD包编号（1~4）
    RET_VAL  :=MW200     //返回的故障信息

Network 3: Title:
   CALL  "EN_AIRT"       //调用SF42允许处理高级优先级中断
    RET_VAL:=MW104       //返回的故障信息
```


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SFC65

SFC66

OB35

OB1

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Network 1：通过MPI发送数据

```
CALL   "X_SEND"                  //调用SFC65
 REQ     :=TRUE                  //激活发送请求
 CONT    :=TRUE                  //发送完成后保持连接
 DEST_ID:=W#16#3                 //接收方的MPI地址
 REQ_ID  :=DW#16#1               //任务标识符
 SD      :=P#M 20.0 BYTE 5       //本地PLC发送区
 RET_VAL:=LW0                    //返回的故障信息
 BUSY    :=L2.0                  //=1表示发送未完成
```

Network 1：从MPI接收数据

```
CALL   "X_RCV"                   //调用SFC66
 EN_DT   :=TRUE                  //激活接收功能
 RET_VAL:=LW0                    //返回的错误代码，=W#16#7000
 REQ_ID  :=LD2                   //SFC 65"X_SEND"的任务标识符
 NDA     :=L6.0                  //为0 没有新的排队数据
 RD      :=P#M 30.0 BYTE 5       //本地PLC数据接收区
```


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SFC68

SFC67

OB35

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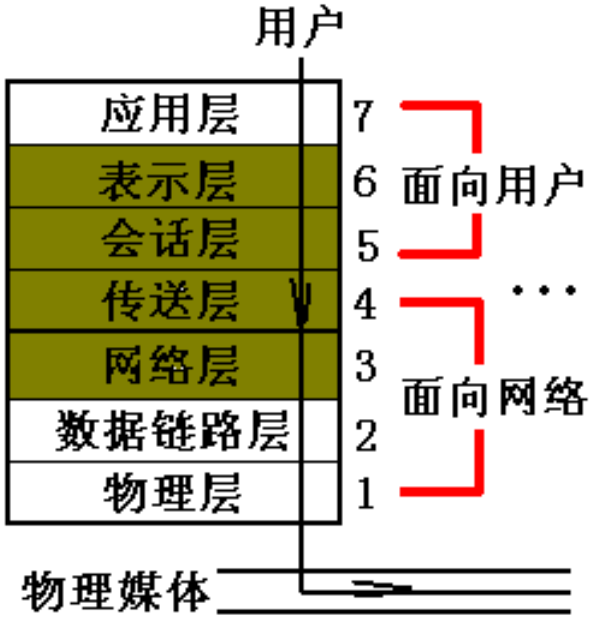
Network 1：用SFC 68 从MPI发送数据

```
CALL  "X_PUT"                          //调用SFC68
 REQ      :=TRUE                       //激活发送请求
 CONT     :=TRUE                       //发送完成后保持连接
 DEST_ID  :=W#16#3                     //接收方的MPI地址
 VAR_ADDR:=P#M 50.0 BYTE 10            //对方的数据接收区
 SD       :=P#M 40.0 BYTE 5            //本地的数据发送区
 RET_VAL  :=LW0                        //返回的参数信息
 BUSY     :=L2.1                       //为1发送未完成
```

Network 2：用SFC 67 从MPI读取对方的数据到本地PLC的数据区

```
CALL  "X_GET"                          //调用SFC67
 REQ      :=TRUE                       //激活请求
 CONT     :=TRUE                       //接受完成后保持连接
 DEST_ID  :=W#16#3                     //对方的MPI地址
 VAR_ADDR:=P#M 60.0 BYTE 10            //要读取的对方的数据区
 RET_VAL  :=LW4                        //返回的参数信息
 BUSY     :=L2.2                       //为1发送未完成
 RD       :=P#M 70.0 BYTE 10           //本地的数据接收区
```


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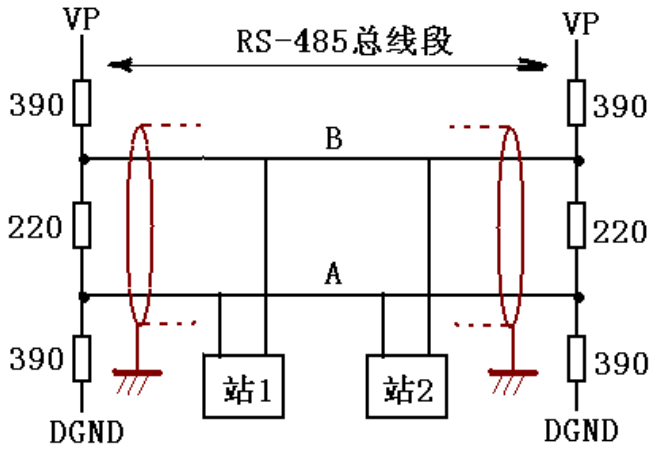


PROFIBUS互连模型

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DP/FMS总线段的结构

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