

Suggestion for an extension of the VLBI field system

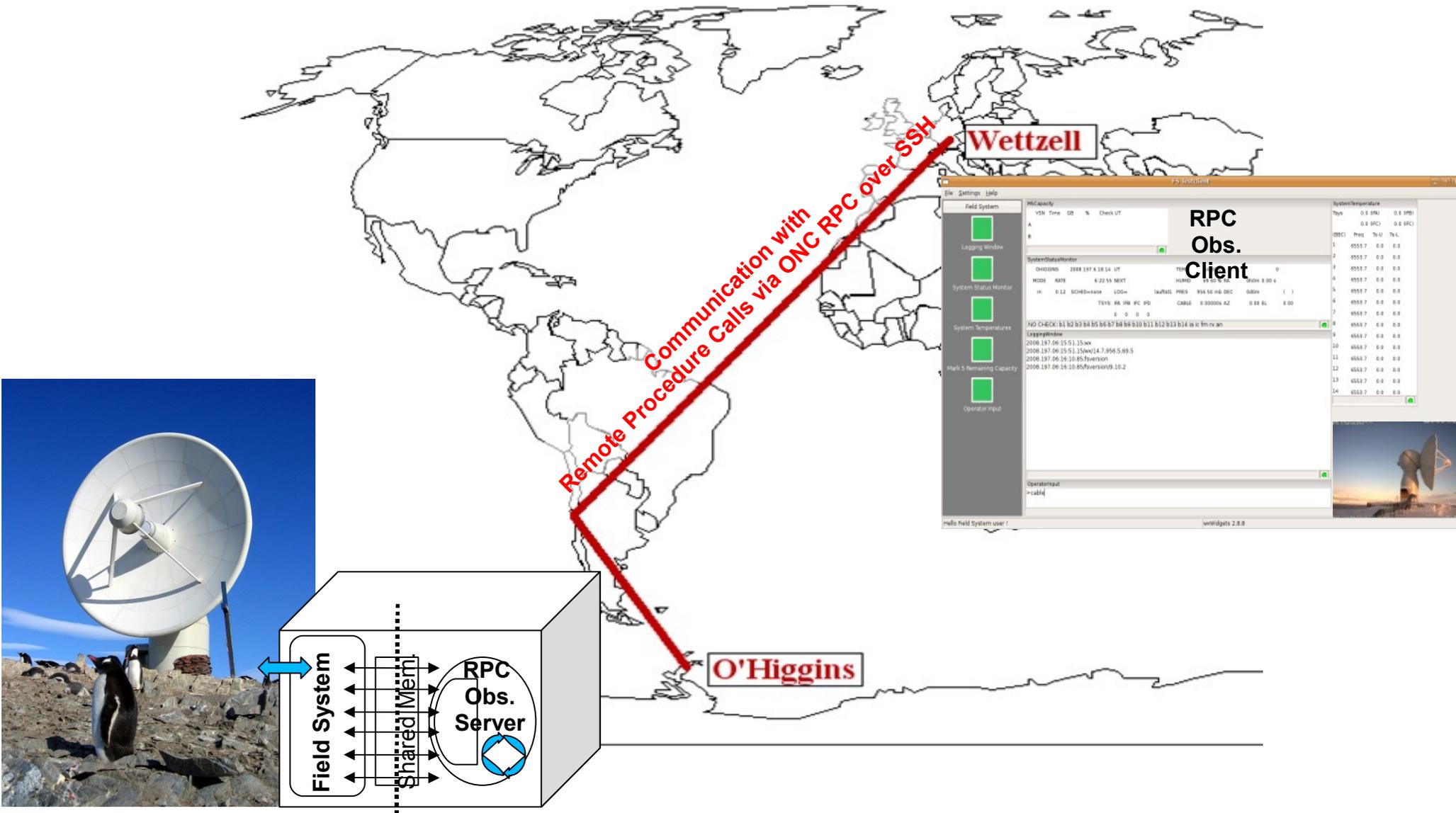


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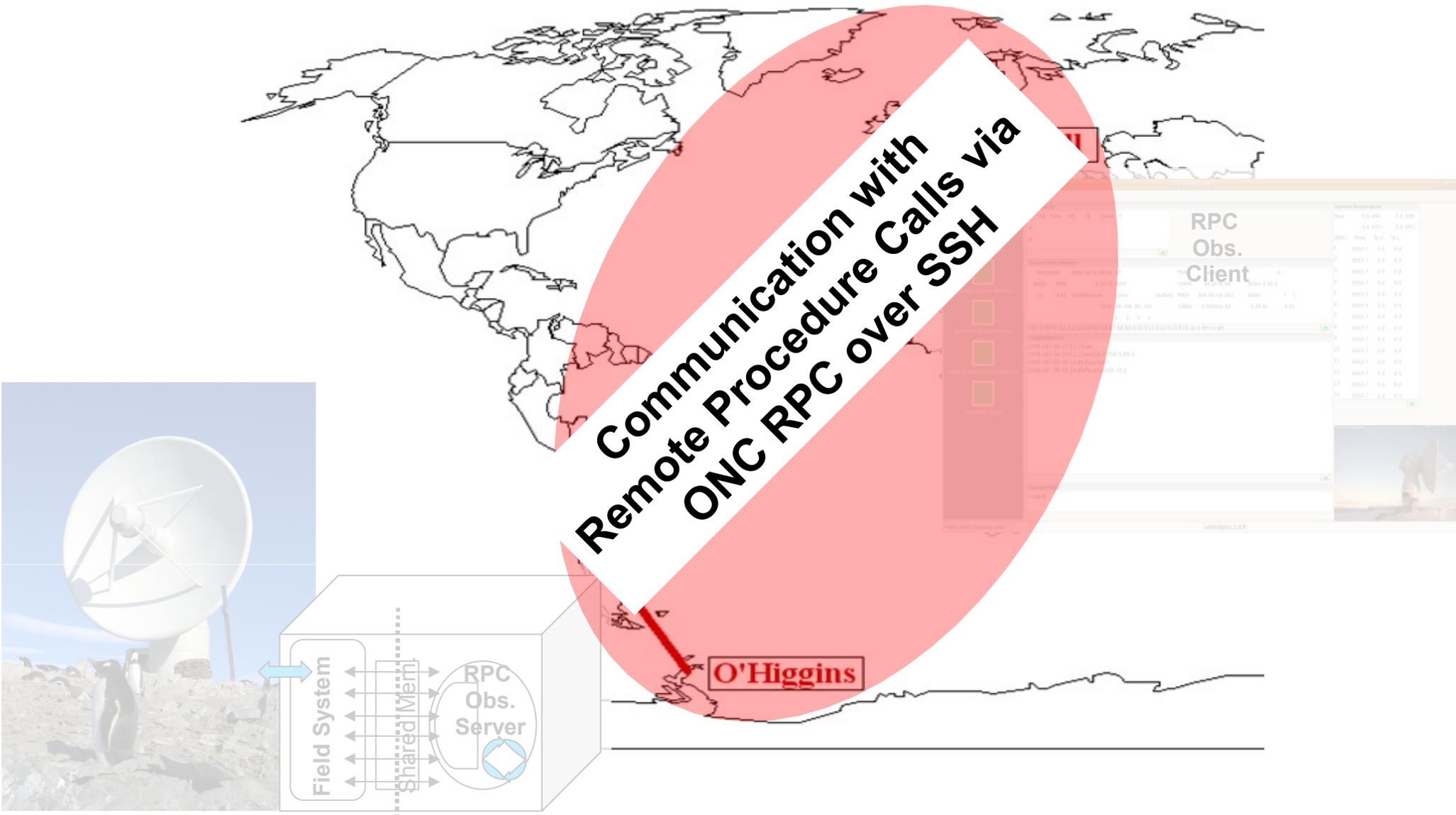


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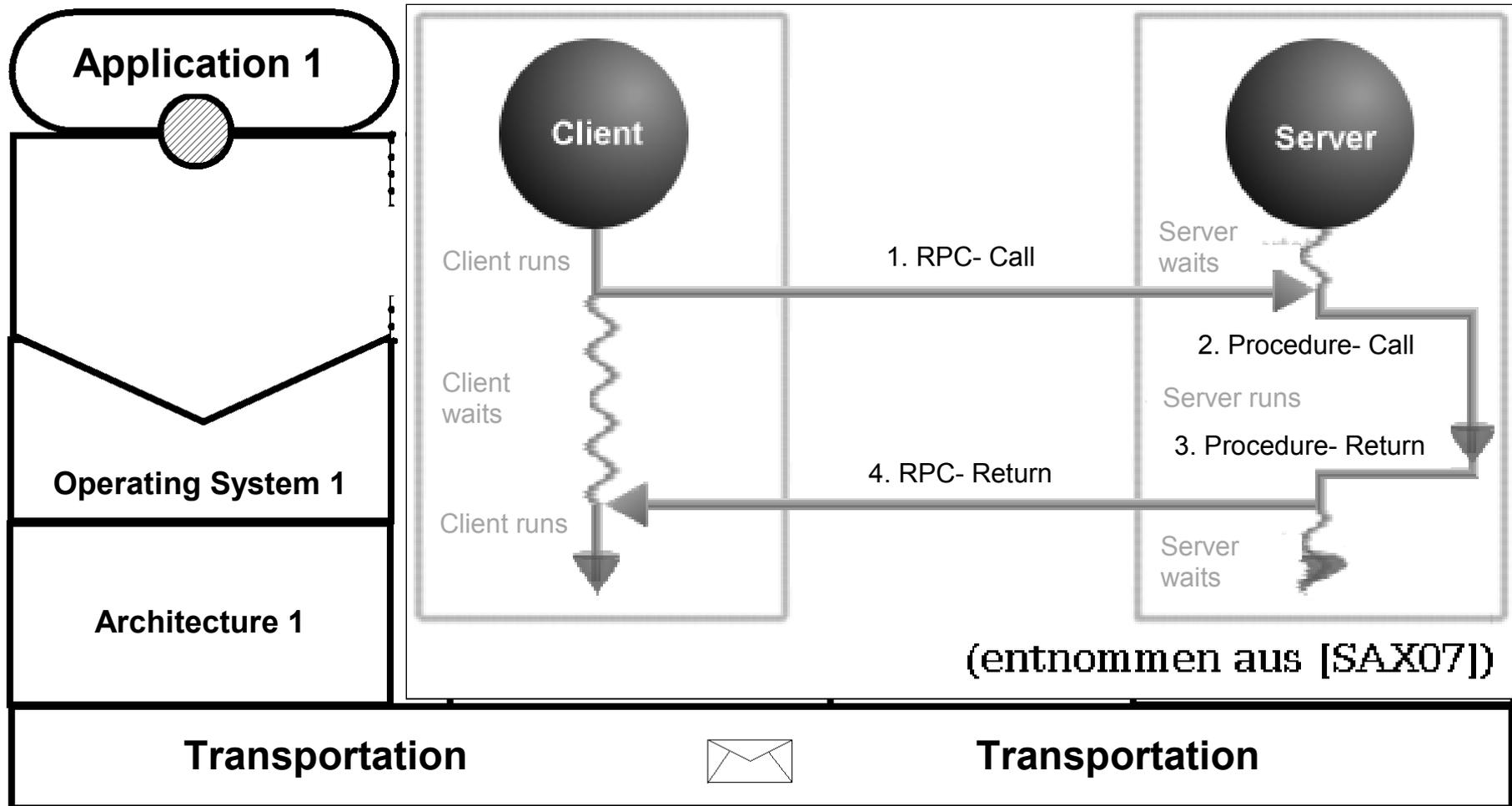
The idea – remote control of VLBI at O’Higgins/Antarctica



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Communication – remote procedure call middleware

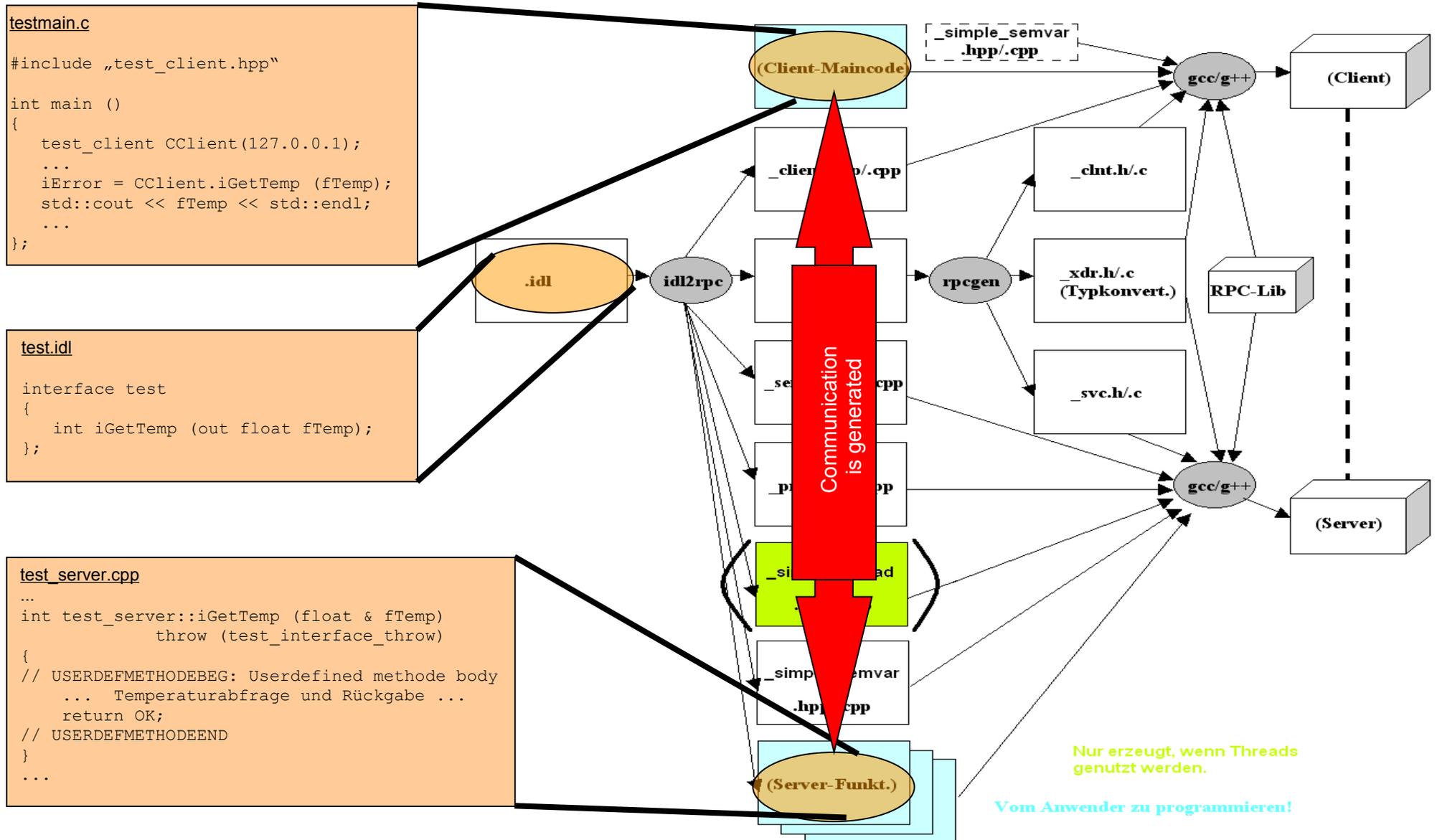


(nach [PUD01] a.a.O. S. 25)

[SAX07]: Saxonia Systems: Remote Procedure Call, <http://www.linuxfibel.de/rpc.htm>, Download 23.04.2007

[PUD01]: Puder, Arno; Römer, Kay: Middleware für vereteilte Systeme, 1.Auflage, dpunkt.verlag GmbH Heidelberg 2001

Interface description – middleware generator



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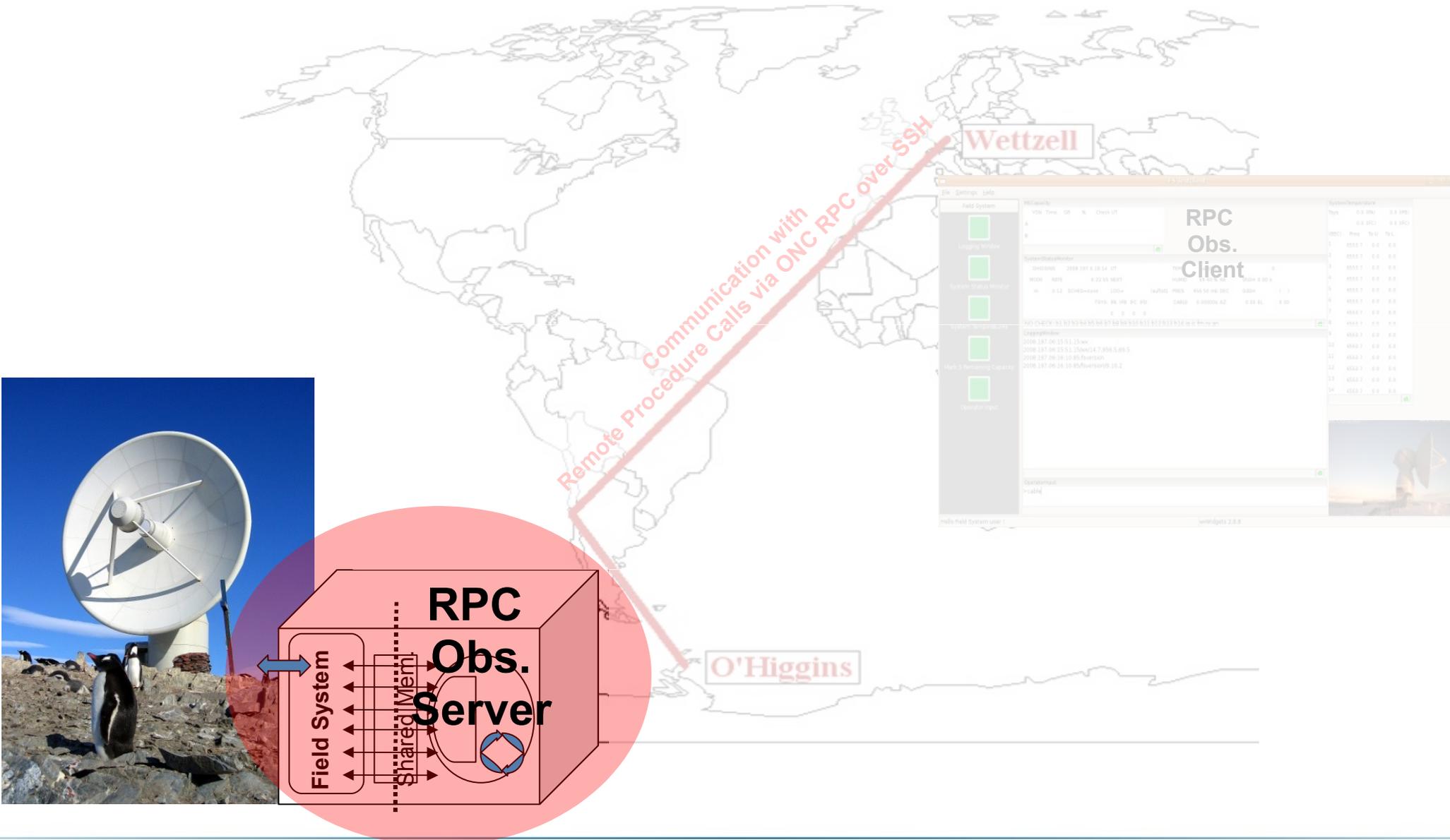
```
const MYCONST1 = 0;
const MYCONST2 = 0x3333;
const MYCONST3 = 12345;
const MYCONST4 = "Hallo";
const MYCONST6 = MYCONST1;
```

```
typedef struct {
char cVar1;
char cVar2;
char cVar3;
char cVar4;
} MYTYPE;
```

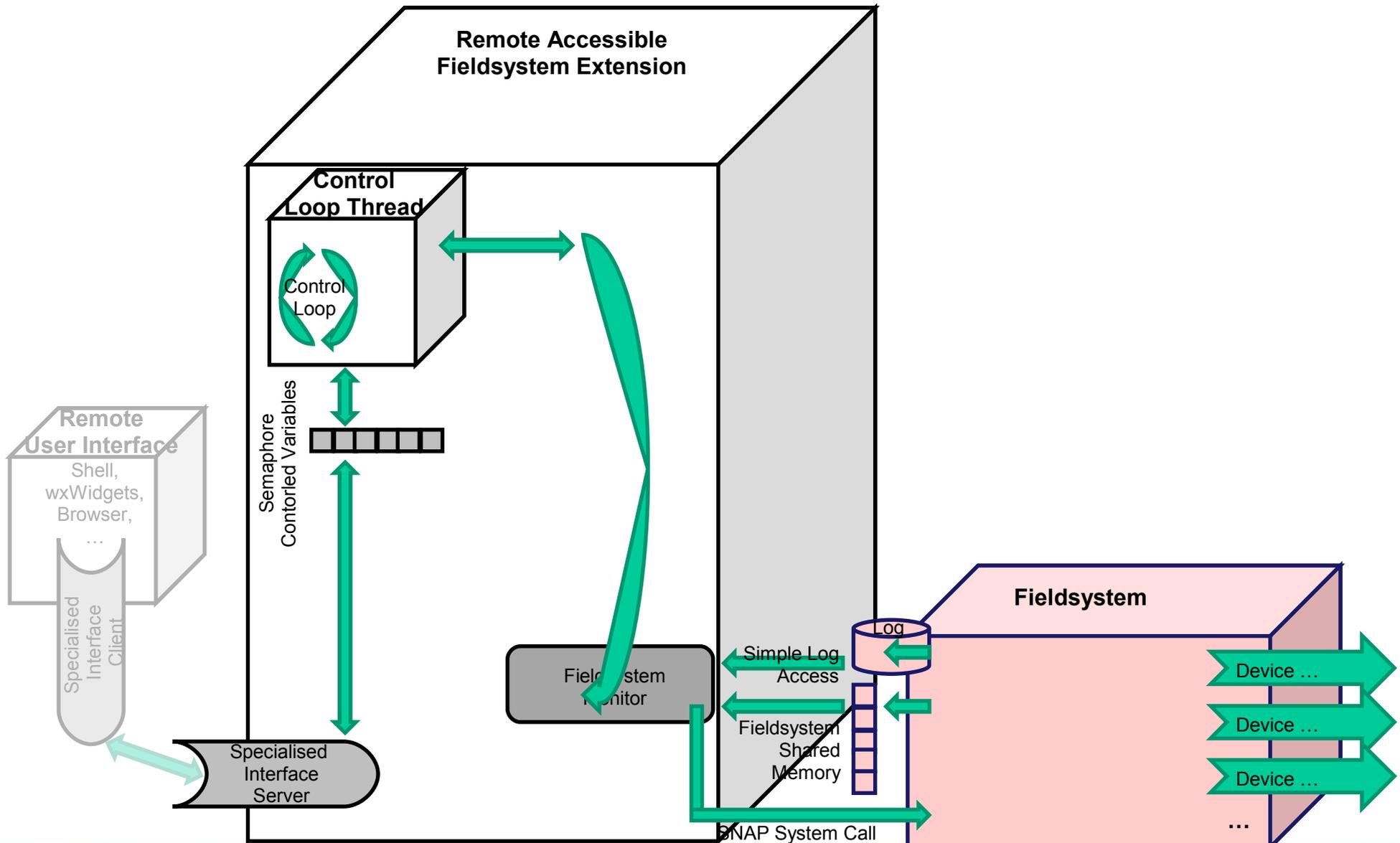
```
typedef struct {
unsigned int iVar1;
int iVar2;
MYTYPE SVar3;
} MYTYPE_COMBINATION;
```

```
interface test
{
// This is a comment
void vFunc ();
int iGet ();
unsigned int uiGet ();
void vSet (in int iVal);
void vSetUnsigned (in unsigned int iVal);
void vGet (out int iVal);
void vSetAndGet (inout int iVal);
void vSetString (in string strText);
void vGetString (out string strText);
void vSetAndGetString (inout string strText);
void vSetMulti (in int iVal, in string strText);
void vGetMulti (out int iVal, out string strText);
void vSetAndGetMulti (inout int iVal, inout string strText);
void vSetArray (in unsigned int Array <>);
void vGetArray (out unsigned int Array <>);
void vSetAndGetArray (inout unsigned int Array <>);
void vSetMultiArray (in unsigned int Array <><><>);
void vGetMultiArray (out unsigned int Array <><><>);
void vSetAndGetMultiArray (inout unsigned int Array <><><>);
};
```

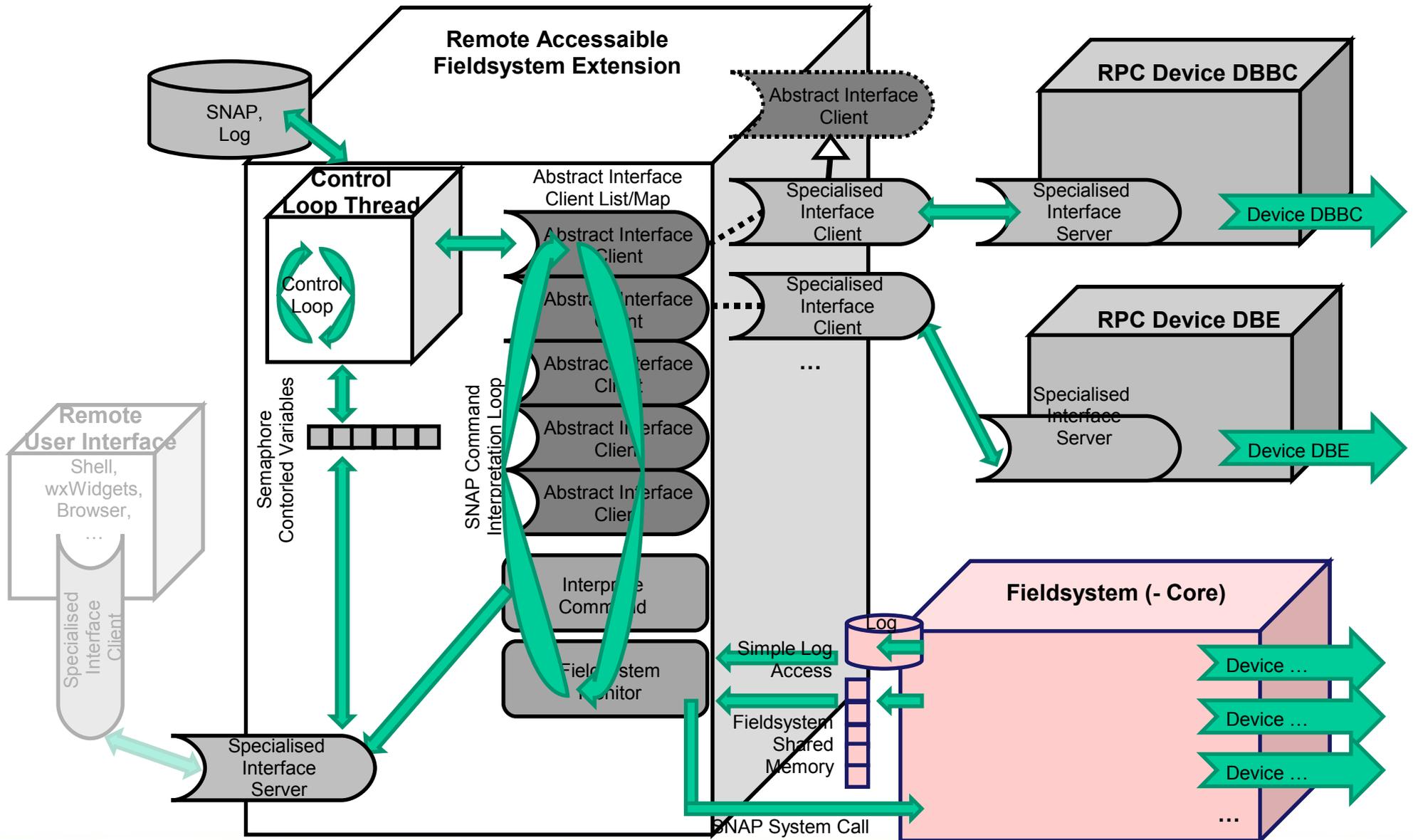
The idea – remote control of VLBI at O’Higgins/Antarctica



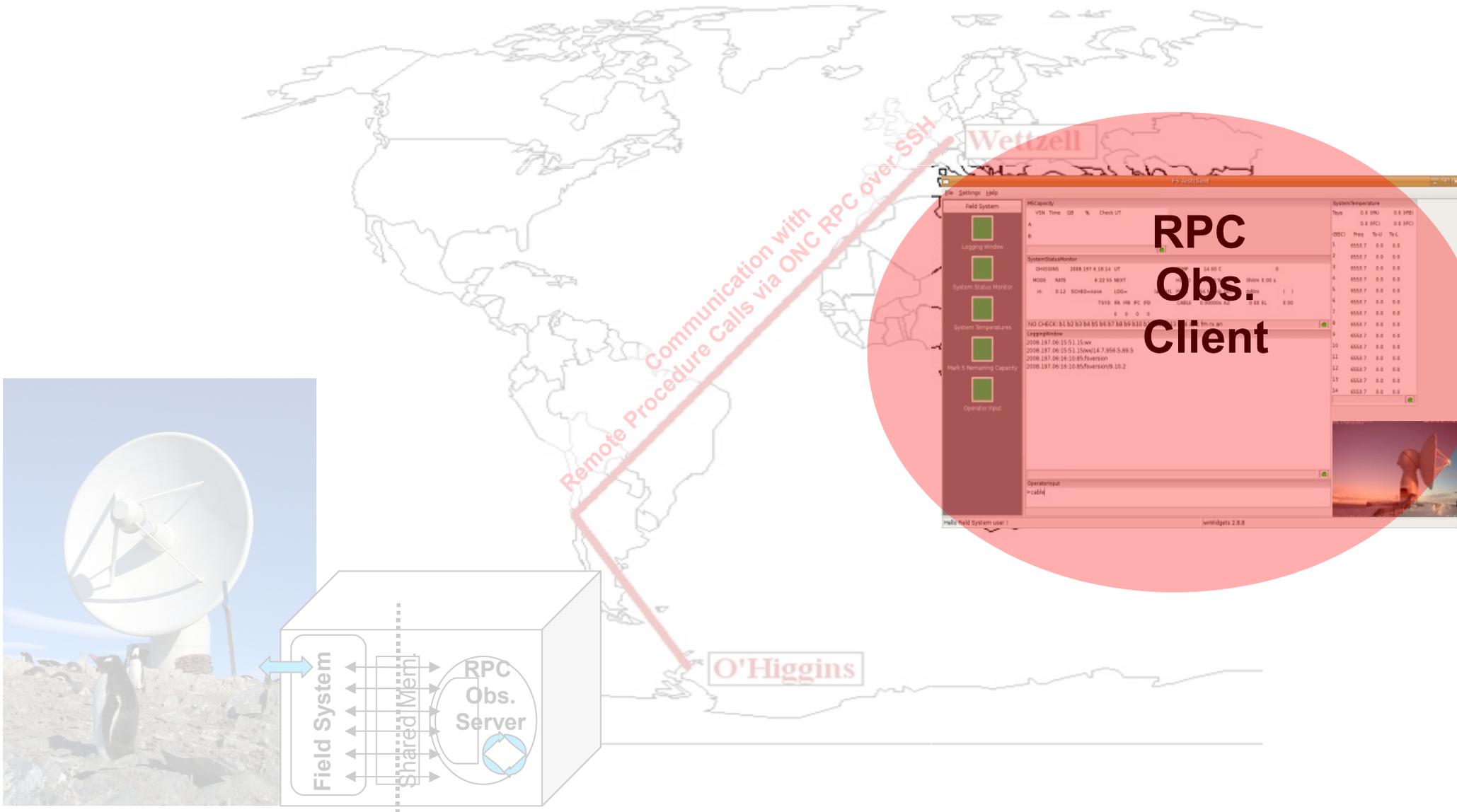
Remote observation – RPC field system extension



General approach – general field system extension

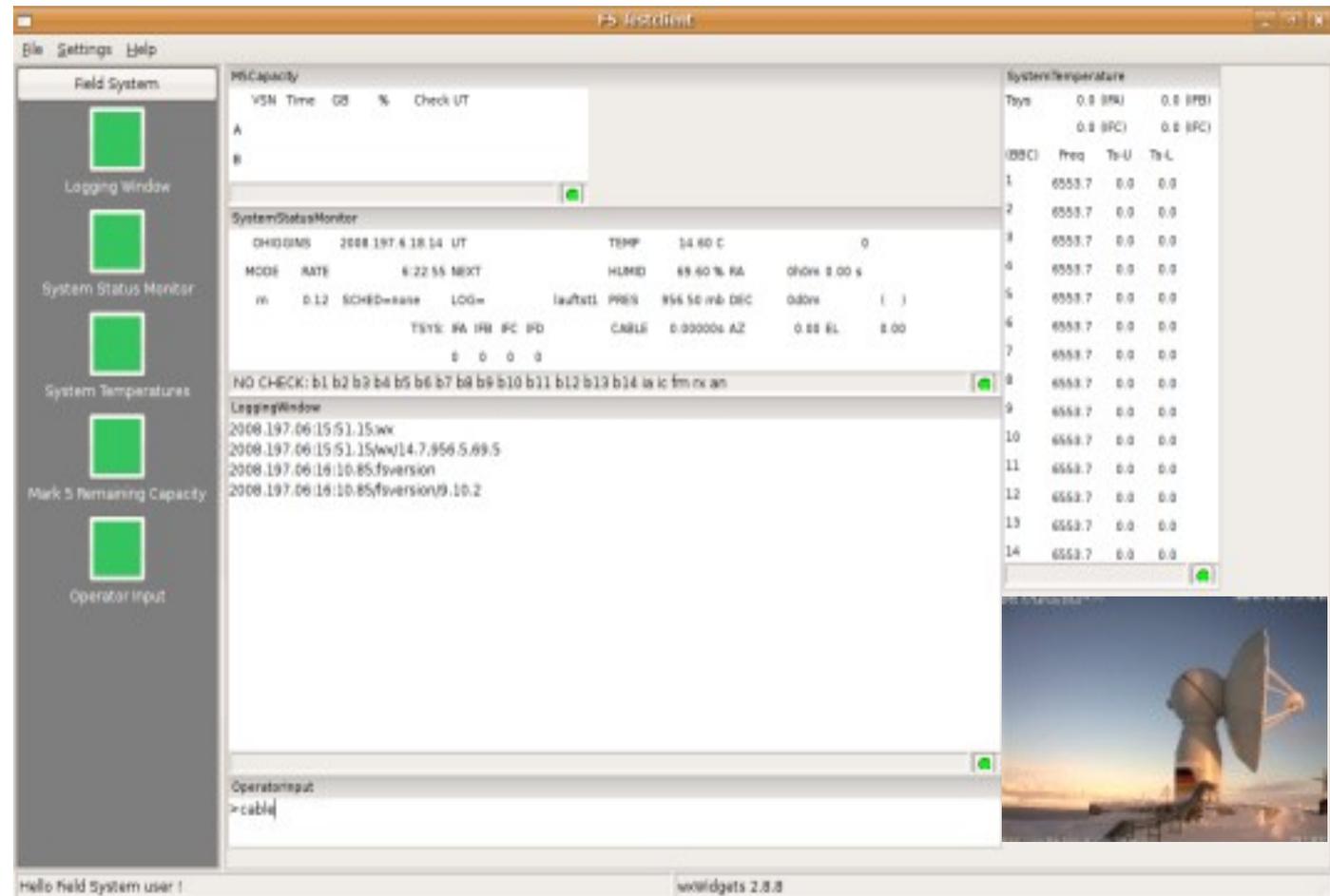


The idea – remote control of VLBI at O’Higgins/Antarctica

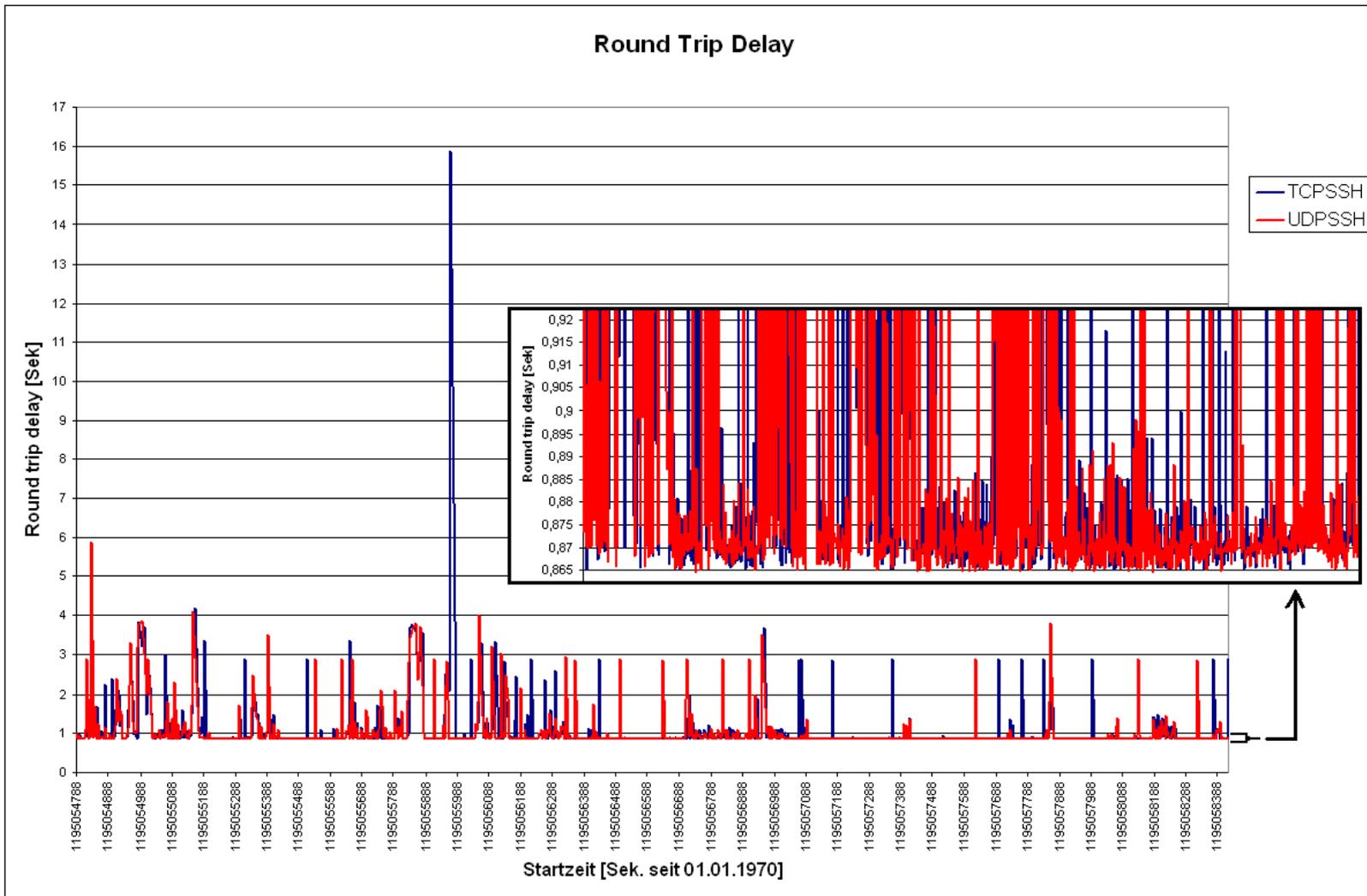


User interface – graphical, textual or browser based

- Separation of control and presentation logic
- Interchangeability of presentation layer (console shell (ncurses), graphical user interface (wxWidgets), web access via Browser, web service, ...)
- Remote controllable via client-server-architecture on idl2rpc-middle-ware
- Modularity in window units and additionally possible, separately created administration user interfaces for each device
- Basis for graphical user interface: wxWidgets (C++ based Open-Source-Framework for plattform independent development of graphical user interfaces)



First test – remote control of VLBI at O’Higgins/Antarctica



First test during VLBI-campagne 02/2007 (first remote controlled experiment is planed for campagne 02/2008)

Thank you!