

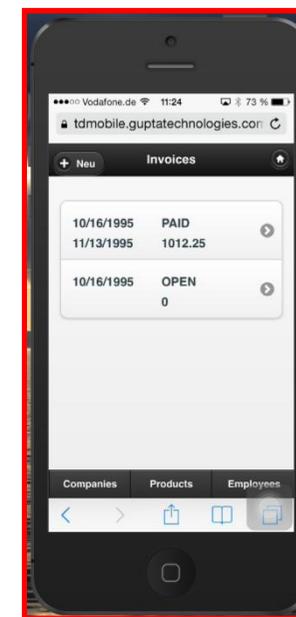
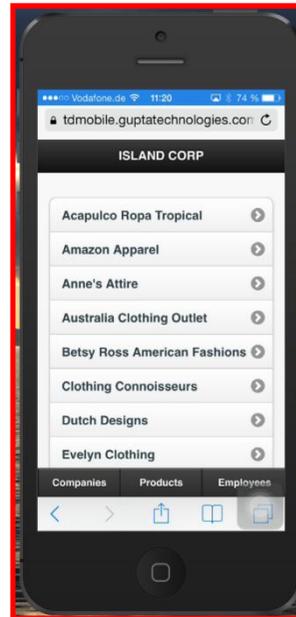
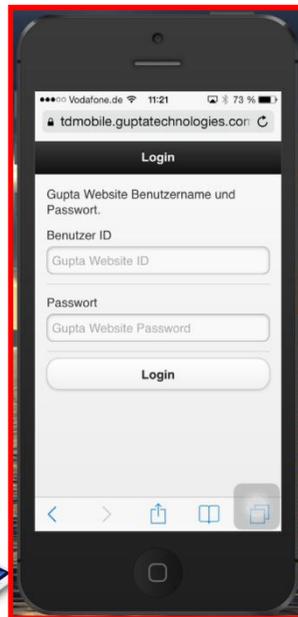
# TD Mobile Ein Beispiel

**Helmut Reimann**



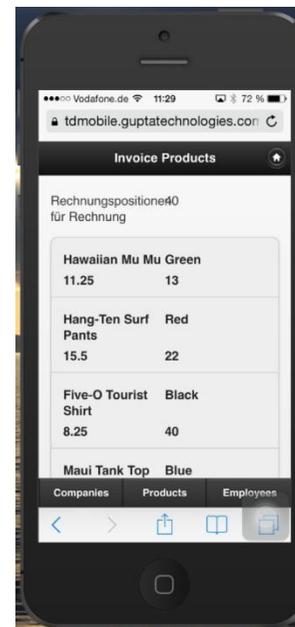
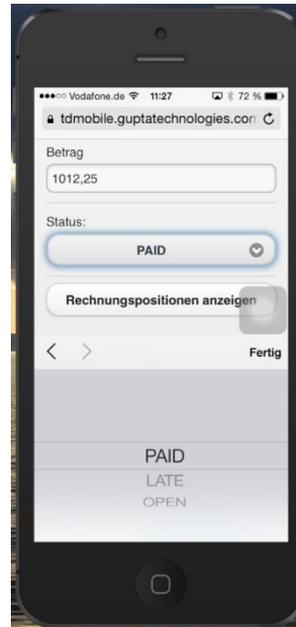
# TD Mobile Beispiel

- Demo Anwendung "Island": Company



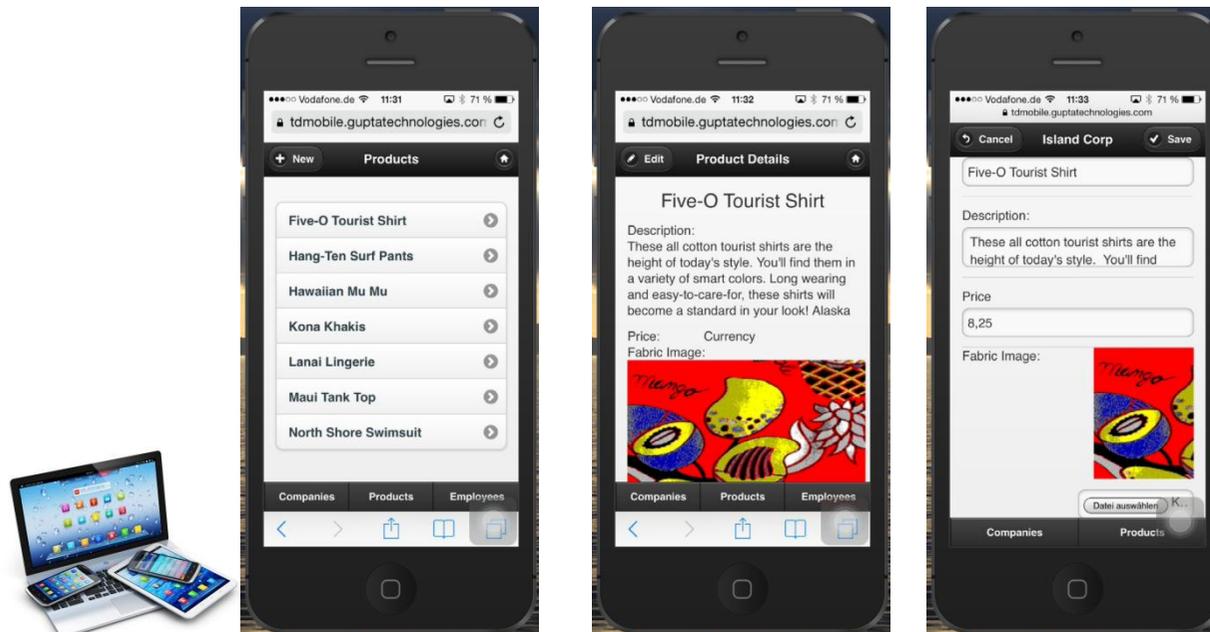
# TD Mobile Beispiel

- Demo Anwendung „Island“: Company



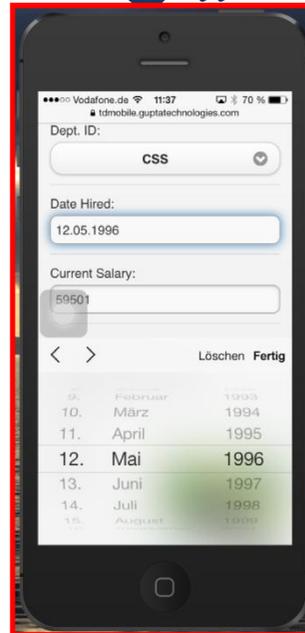
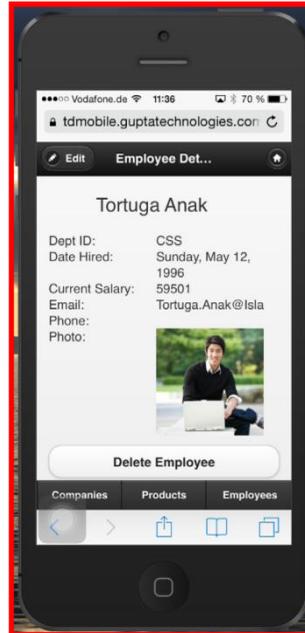
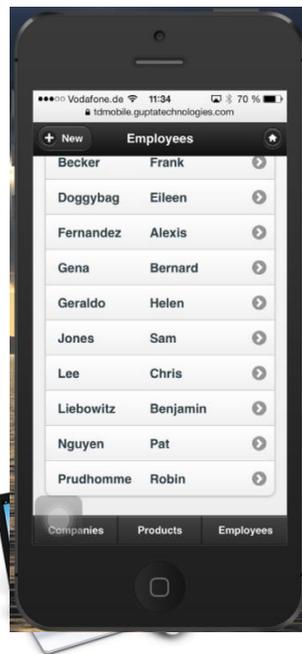
# TD Mobile Beispiel

- Demo Anwendung „Island“: Product



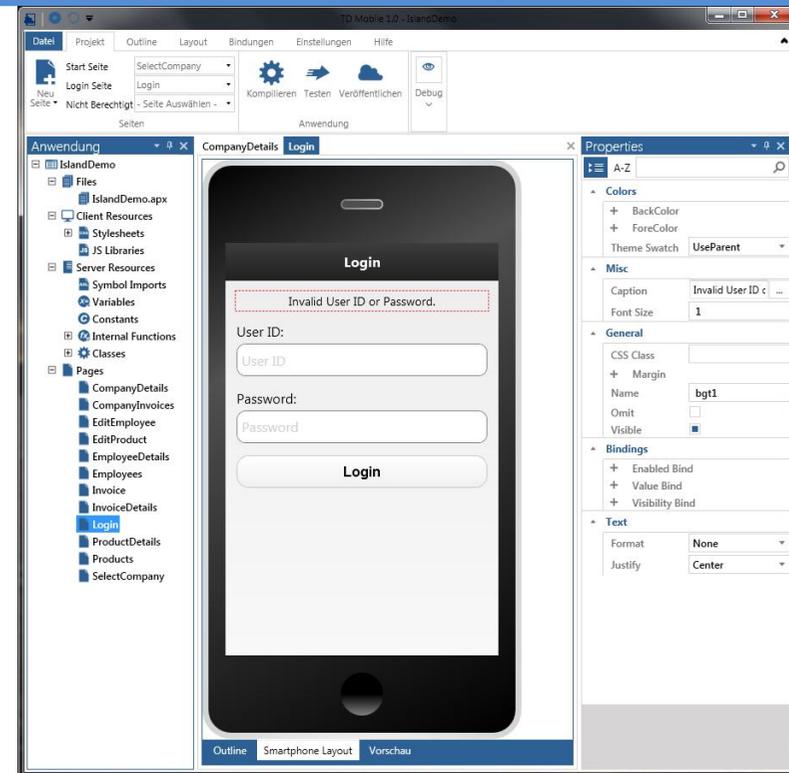
# TD Mobile Beispiel

- Demo Anwendung „Island“: Employee



# TD Mobile

- TD Mobile
  - Anwendungsstruktur
    - 12 Pages
    - Stylesheet
    - Klassen
      - Nur für Bindings
    - Funktionen



# TD Mobile

- Externes Stylesheet



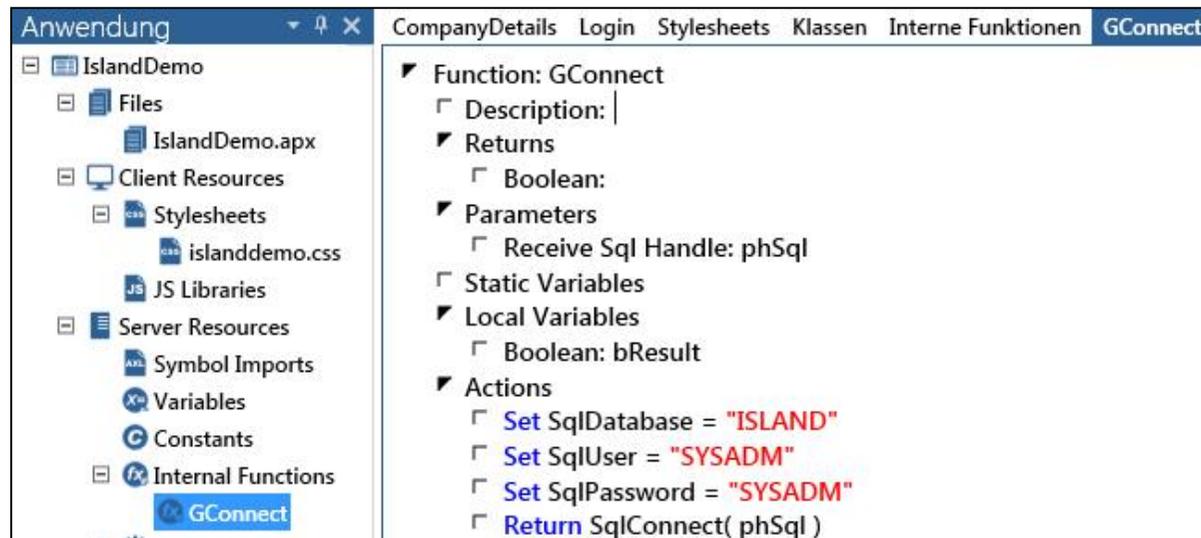
Name	Beschreibung
islanddemo	11/8/2013 11:45 AM Kaskadierendes Stylesheet-Dokument
jquery.mobile.flatui	9/28/2013 11:33 PM Kaskadierendes Stylesheet-Dokument
td	11/12/2013 8:01 PM Kaskadierendes Stylesheet-Dokument

```
.smallpic {  
    width:200px;  
}  
  
.bigpic {  
    width:300px;  
}
```



# TD Mobile

- **Interne Funktion:**



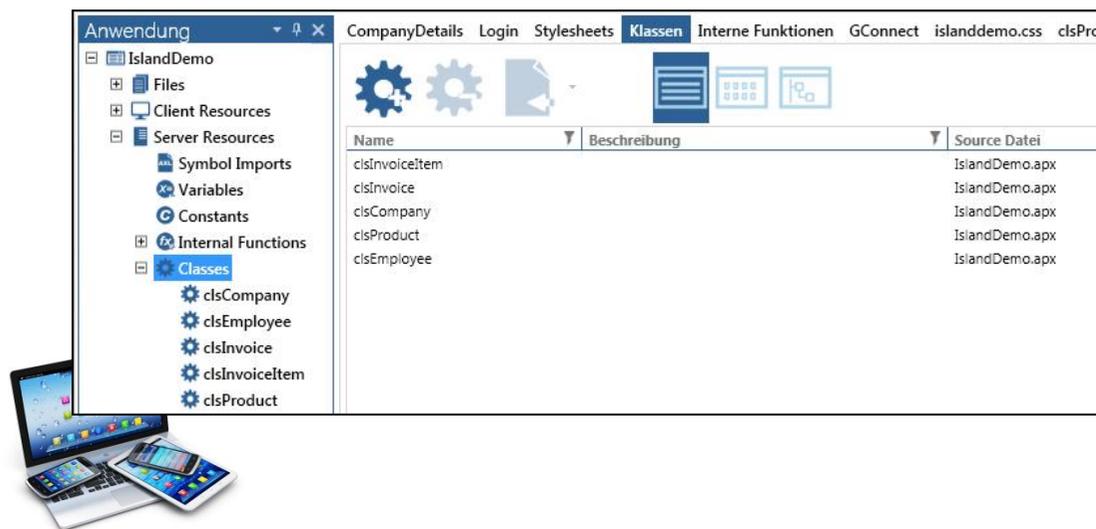
The screenshot displays a development environment window titled 'Anwendung' with several tabs: 'CompanyDetails', 'Login', 'Stylesheets', 'Klassen', 'Interne Funktionen', and 'GConnect'. The left sidebar shows a project tree for 'IslandDemo' with folders for 'Files', 'Client Resources', 'Server Resources', and 'Internal Functions'. The 'Internal Functions' folder is expanded, showing the 'GConnect' function. The right pane shows the details for the 'GConnect' function:

- Function: GConnect
- Description: |
- Returns
  - Boolean:
- Parameters
  - Receive Sql Handle: phSql
- Static Variables
- Local Variables
  - Boolean: bResult
- Actions
  - Set SqlDatabase = "ISLAND"
  - Set SqlUser = "SYSADM"
  - Set SqlPassword = "SYSADM"
  - Return SqlConnect( phSql )



# TD Mobile

- **Interne Klassen: Für „Bindings“**
  - **Option: Einbinden einer TD APL**



▼ Functional Class: clsCompany
└ Description:
└ Derived From
▼ Instance Variables
└ String: Name
└ Number: ID
└ String: Address
└ String: City
└ String: State
└ String: Zip
└ Functions

# TD Mobile

## • Login:



- Web Page: Login
  - Description: |
  - Client
    - Menu
    - Contents
    - Bindings
    - Functions
    - Parameters
    - Page Events
  - Server
    - Functions
    - Operations

Outline

- Client
  - Menu
  - Contents
    - Background Text: bgt1
    - Data Field: dfUserID
    - Data Field: dfPassword
    - Pushbutton: pbLogin
  - Bindings
    - String: PASSWORD
    - String: USER\_ID
    - Boolean: LOGIN\_STATUS
  - Functions
  - Parameters
  - Page Events
    - On Create
      - Set: LOGIN\_STATUS TRUE

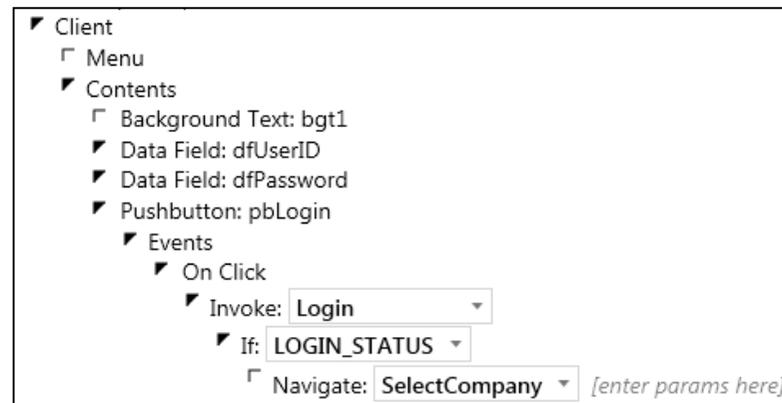
Client - Teil

- Server
  - Functions
    - Function: CheckForPhoneColumn
  - Operations
    - Operation: Login
      - Description:
      - Parameters
        - String: psUserID
          - Binding: USER\_ID
        - String: psPassword
          - Binding: PASSWORD
      - Returns
        - Boolean:
          - Binding: LOGIN\_STATUS
      - Local Variables
      - Actions
        - If psUserID = ""
          - Return FALSE
        - If psPassword = ""
          - Return FALSE
        - Call SalWebLogin(psUserID, userRoles)
        - Call CheckForPhoneColumn()
        - Return TRUE

Server – Teil  
Cookie setzen mit  
SalWebLogin()

# TD Mobile

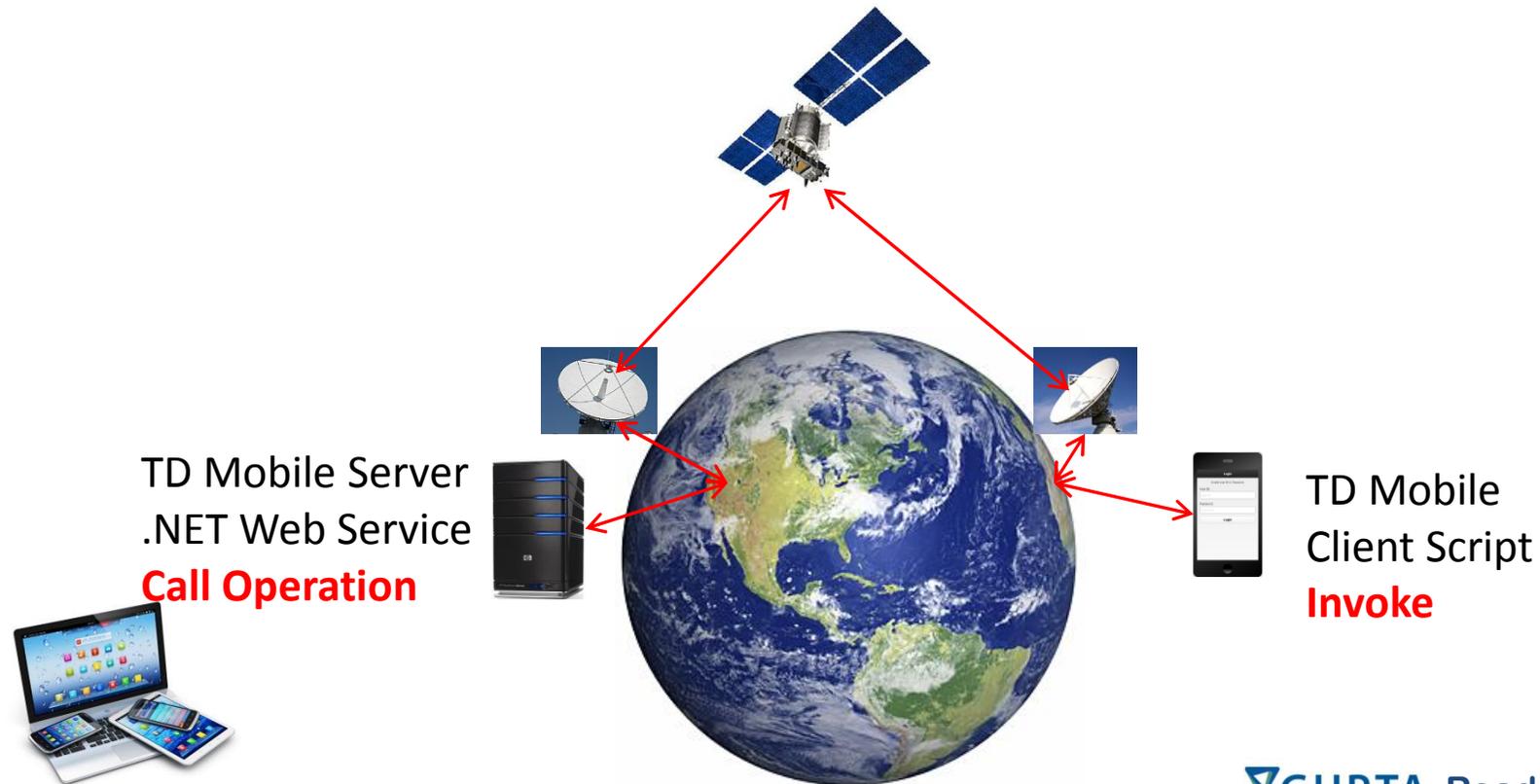
- **Login:**



pbLogin Script

**Achtung: Asynchroner Ablauf**

# TD Mobile



# TD Mobile

## • Company Liste:



General	
CSS Class	
+ Margin	
Name	ltv1
Omit	<input type="checkbox"/>
Visible	<input checked="" type="checkbox"/>
Bindings	
+ Enabled Bind	
- List Source Bind	
Path	COMPANIES
- Value Bind	
Direction	Set
Path	COMPANY
+ Visibility Bind	

List View

```

Web Page: SelectCompany
  Description:
  Client
    Menu
    Contents
      Background Text: bkgdCompanyName
      cListView: ltv1
      Navigation Bar: nav1
      Pushbutton: pbProducts
      Pushbutton: pbCompanies
      Pushbutton: pbGotoEmployees
    Bindings
      clsCompany: COMPANIES[*]
        String: Name
        Number: ID
        String: Address
        String: City
        String: State
        String: Zip
      clsCompany: COMPANY
        String: Name
        Number: ID
        String: Address
        String: City
        String: State
        String: Zip
    Functions
    Parameters
    Page Events
  
```

Outline

```

Client
  Menu
  Contents
    Background Text: bkgdCompanyName
    cListView: ltv1
      Events
        On Click
          Navigate: CompanyDetails COMPANY.ID
  
```

Navigation in der ListView  
Parameterübergabe an nächste Page

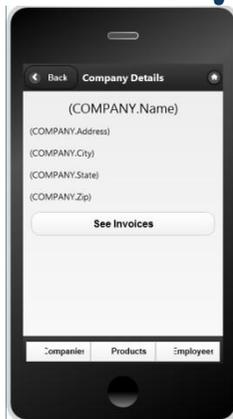
```

Server
  Functions
  Operations
    Operation: GetCompanies
      Description:
      Parameters
      Returns
        clsCompany: [*]
          Binding: COMPANIES
      Local Variables
      Actions
        If GConnect( hSql )
          If SqlPrepareAndExecute( hSql, "select company_id,
          Call SqlDisconnect( hSql )
          Return objCompanies
  
```

Operation zum füllen der ListView

# TD Mobile

- **Company Details:**



```
Client
├── Menu
├── Contents
├── Bindings
│   ├── clsCompany: COMPANY
│   │   ├── String: Zip
│   │   ├── String: State
│   │   ├── String: City
│   │   ├── String: Address
│   │   ├── Number: ID
│   │   └── String: Name
├── Functions
├── Parameters
│   └── Number: COMPANY_ID
├── Page Events
│   └── On Create
│       └── Invoke: GetCompanyDetails
```

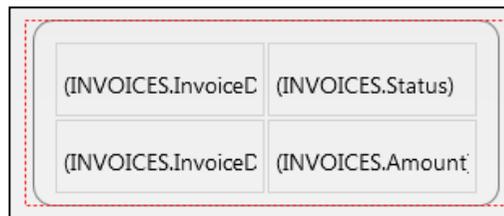
Client Code

```
Server
├── Functions
├── Operations
│   └── Operation: GetCompanyDetails
│       ├── Description:
│       ├── Parameters
│       │   └── Number: pnID
│       │       └── Binding: COMPANY_ID
│       ├── Returns
│       │   └── clsCompany:
│       │       └── Binding: COMPANY
│       ├── Local Variables
│       └── Actions
│           └── If GConnect( hSql )
│               ├── If SqlPrepareAndExecute( hSql, "SELECT COMPANY_ID,
│               ├── Call SqlDisconnect( hSql )
│               └── Return objCompany
```

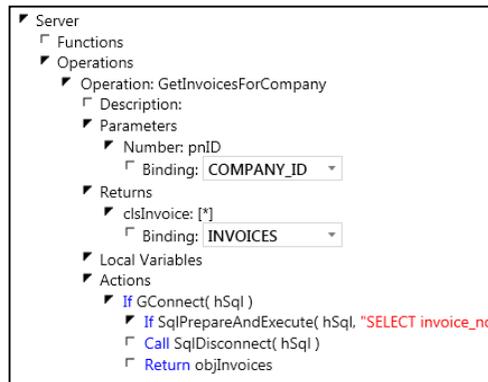
Operation

# TD Mobile

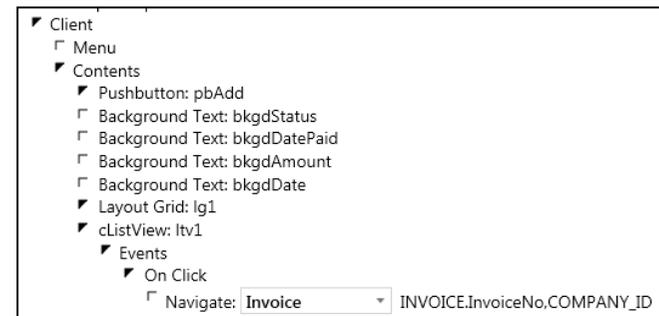
## • Invoice:



ListView mit LayoutGrid und Textfelder



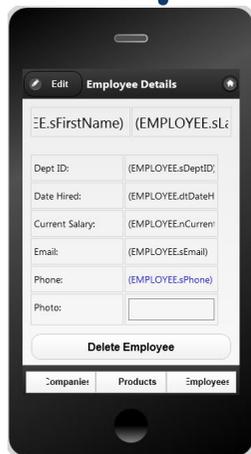
Operation zum Befüllen der Listview



ListView: Navigation mit Übergabe von Paramtern

# TD Mobile

- Employee Details:



Dept ID:	(EMPLOYEE.sDeptID)
Date Hired:	(EMPLOYEE.dtDateH
Current Salary:	(EMPLOYEE.nCurrent
Email:	(EMPLOYEE.sEmail)
Phone:	(EMPLOYEE.sPhone)
Photo:	

LayoutGrid mit Textfelder  
und Labeln



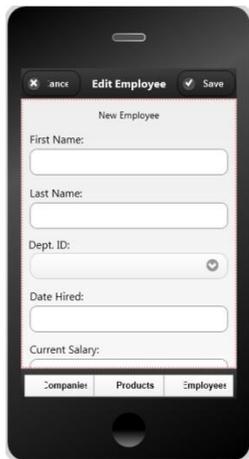
Textfeld mit  
Format

+ Bindings	
+ Enabled Bind	
- Value Bind	
Direction	Get
Path	EMPLOYEE.dtDateHired
+ Visibility Bind	
+ Text	
Format	LongDate
Justify	Left



# TD Mobile

- **Edit Employee:**



- Client
  - Menu
  - Contents
    - Data Field: dfFirstName
    - Data Field: dfLastName
    - Data Field: dfDateHired
    - Pushbutton: pbSave
    - Pushbutton: pbCancel
    - Combo Box: cmbDeptID
    - Data Field: dfEmail
    - Data Field: dfCurrentSalary
    - Layout Grid: lg1
    - Background Text: bgt1
    - Picture: imgPhoto
    - Data Field: df1

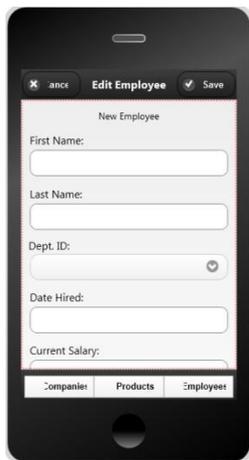
Objekte auf der Page  
(Ausser Navigation)

<b>Bindings</b>	
+ Enabled Bind	
- Value Bind	
Direction	GetSet
Path	EMPLOYEE.dtDateHired
+ Visibility Bind	
<b>Data Field</b>	
Hint Text	
Input Type	Date
Justify	Left
Multi-Line	<input type="checkbox"/>
Read Only	<input type="checkbox"/>
Show Clear Buttc	<input type="checkbox"/>

Eigenschaft „Date“

# TD Mobile

- **Edit Employee:**



- Client
  - Menu
  - Contents
    - Data Field: dfFirstName
    - Data Field: dfLastName
    - Data Field: dfDateHired
    - Pushbutton: pbSave
    - Pushbutton: pbCancel
    - Combo Box: cmbDeptID
    - Data Field: dfEmail
    - Data Field: dfCurrentSalary
    - Layout Grid: lg1
    - Background Text: bgt1
    - Picture: imgPhoto
    - Data Field: df1

Objekte auf der Page  
(Ausser Navigation)

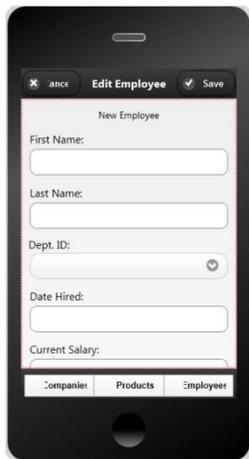
Property grid for the 'dfEmail' data field:

- Bindings
  - Enabled Bind
  - Value Bind
    - Direction: GetSet
    - Path: EMPLOYEE.sEmail
  - Visibility Bind
- Data Field
  - Hint Text
  - Input Type: Email
  - Justify: Left
  - Multi-Line:
  - Read Only:
  - Show Clear Butt:

Eigenschaft „Email“

# TD Mobile

## • Edit Employee:



- Client
  - Menu
  - Contents
    - Data Field: dfFirstName
    - Data Field: dfLastName
    - Data Field: dfDateHired
    - Pushbutton: pbSave
    - Pushbutton: pbCancel
    - Combo Box: cmbDeptID
    - Data Field: dfEmail
    - Data Field: dfCurrentSalary
    - Layout Grid: lg1
    - Background Text: bgt1
    - Picture: imgPhoto
    - Data Field: df1

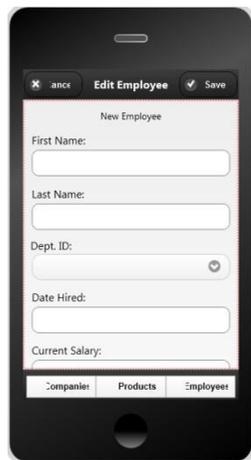
Objekte auf der Page  
(Ausser Navigation)

▲ Bindings	
+ Enabled Bind	
- Value Bind	
Direction	GetSet
Path	EMPLOYEE.nCurrentSalari
+ Visibility Bind	
▲ Data Field	
Hint Text	
Input Type	Number
Justify	Left
Multi-Line	<input type="checkbox"/>
Read Only	<input type="checkbox"/>
Show Clear Butto	<input type="checkbox"/>

Eigenschaft „Number“

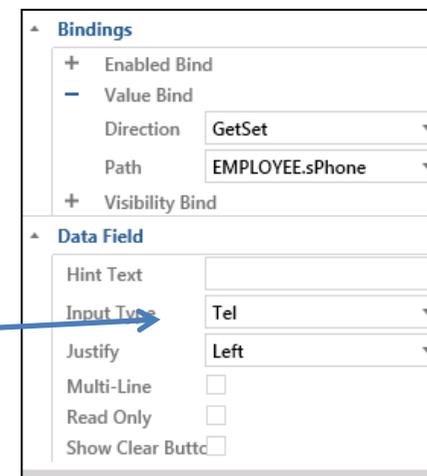
# TD Mobile

- **Edit Employee:**



- ✔ Picture: imgPhoto
- ✔ Data Field: df1
- ✔ Navigation Bar: nav1
- ✔ Pushbutton: pbCompanies
- ✔ Pushbutton: pbProducts
- ✔ Pushbutton: pbEmployees
- ✔ Data Field: dfPhone
- ☐ Background Text: bgt2

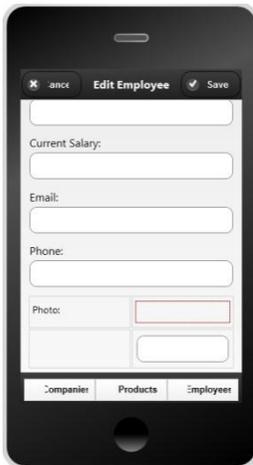
Objekte auf der Page



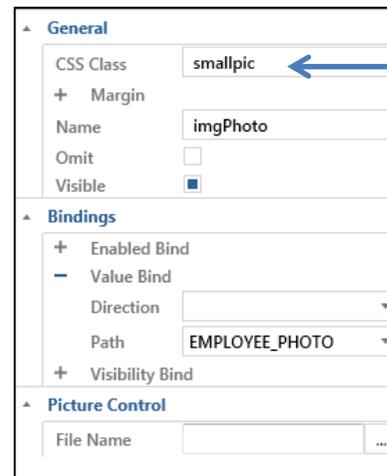
Eigenschaft „Tel“

# TD Mobile

- Edit Employee: „Photo“



Picture Objekt



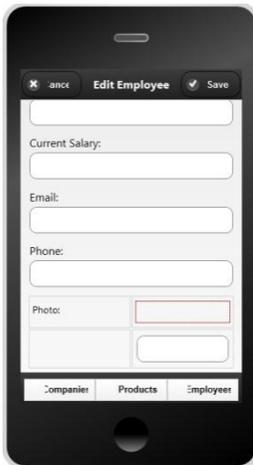
Aus CSS File

Eigenschaft „Bild“

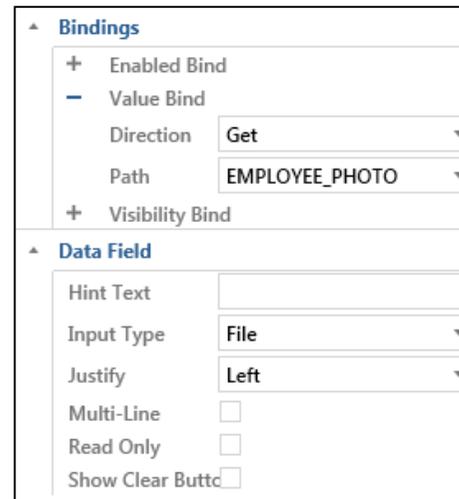


# TD Mobile

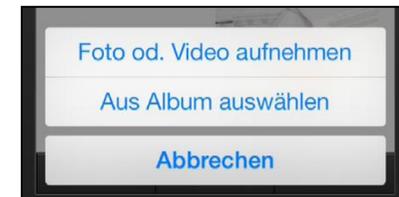
- Edit Employee: „Photo“



Datenfeld (Öffnen eines Bildes)



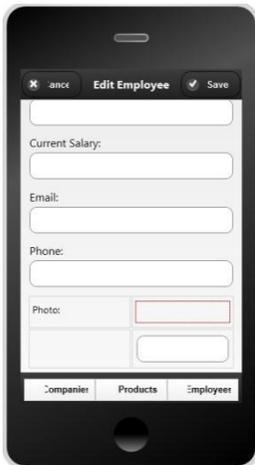
Datenfeld „Input Type“ = File



Zur Laufzeit

# TD Mobile

- **Edit Employee:**



```
Bindings
├─ clsEmployee: EMPLOYEE
│   ├─ String: sPhone
│   ├─ String: nID
│   ├─ String: sFirstName
│   ├─ String: sLastName
│   ├─ String: sDeptID
│   ├─ Date/Time: dtDateHired
│   ├─ Number: nCurrentSalary
│   ├─ String: sEmail
│   └─ Binary: binPhoto
├─ Boolean: SAVESTATUS
└─ Binary: EMPLOYEE_PHOTO
```

Bindings

```
Pushbutton: pbSave
├─ Events
│   └─ On Click
│       └─ Invoke: SaveChanges
│           └─ If: SAVESTATUS
│               └─ Navigate: Employees [enter params here]
```

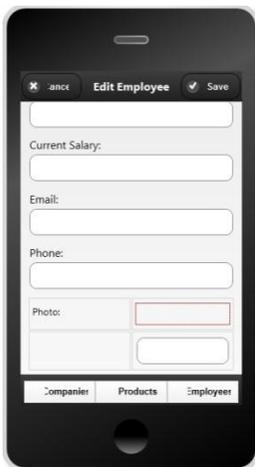
Speichern der Daten

```
Parameters
├─ String: EMPLOYEE_ID
└─ Page Events
    └─ On Create
        └─ Invoke: GetEmployeeDetails
```

Page Events & Parameter

# TD Mobile

- **Edit Employee:**



```
Operation: SaveChanges
  Description:
  Parameters
    clsEmployee: pObjEmployee
      Binding: EMPLOYEE
    Binary: pbinPhoto
      Binding: EMPLOYEE_PHOTO
  Returns
    Boolean:
      Binding: SAVESTATUS
  Local Variables
  Actions
    Set bStatus = FALSE
    If GConnect( hSql )
      ! New employee?
      If pObjEmployee.nID = ""
        Else
      Call SqlDisconnect( hSql )
    Return bStatus
```

Speichern der Daten

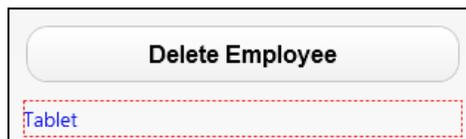
```
Operation: GetEmployeePhoto
  Description:
  Parameters
    String: psID
      Binding: EMPLOYEE_ID
  Returns
    Binary:
      Binding: EMPLOYEE_PHOTO
  Local Variables
  Actions
    If GConnect( hSql )
      If SqlPrepareAndExecute( hSql, "SELECT photo INTO :binPhoto FROM ..." )
        Call SqlFetchNext( hSql, nInd )
      Call SqlDisconnect( hSql )
    Return binPhoto
```

Foto aus der Datenbank

Speichern der Daten

# TD Mobile

- TD Mobile Java Interface
  - Setzen eines Browser Typs:



„Schalter“



<b>General</b>	
Caption	Tablet
CSS Class	
+ Margin	
Name	Ink2
Omit	<input type="checkbox"/>
<b>Misc</b>	
Justify	Left
<b>Link</b>	
Link Type	Web
Link URL	javascript:Td.Util.setDisplay("t")
<b>Bindings</b>	
+ Value Bind	
+ Visibility Bind	

Link ruft ein TD Mobile Java Funktion auf

EmployeeDetails.p	11/8/2013 4:02 PM	HTML-Dokument
EmployeeDetails.t	11/8/2013 4:02 PM	HTML-Dokument

„t“ = Tablet – „p“ = Phone

# TD Mobile

- TD Mobile Java Interface
  - Setzen eines Browser Typs:



„Schalter“



General	
Caption	Tablet
CSS Class	
+ Margin	
Name	Ink2
Omit	<input type="checkbox"/>
Misc	
Justify	Left
Link	
Link Type	Web
Link URL	javascript:Td.Util.setDisplay("t")
Bindings	
+ Value Bind	
+ Visibility Bind	

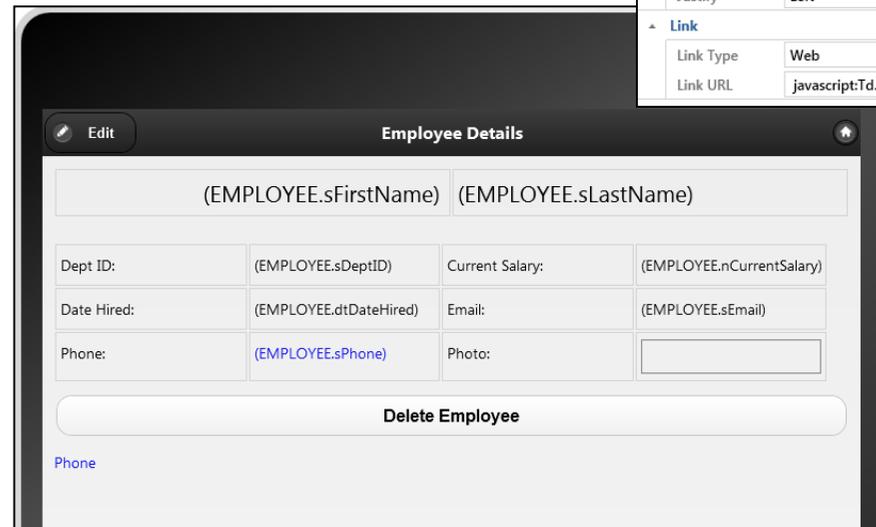
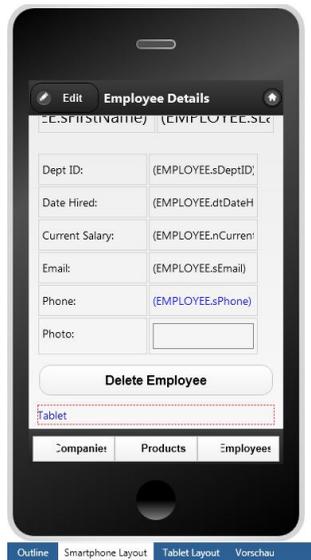
Link ruft ein TD Mobile Java Funktion auf

EmployeeDetails.p	11/8/2013 4:02 PM	HTML-Dokument
EmployeeDetails.t	11/8/2013 4:02 PM	HTML-Dokument

„t“ = Tablet – „p“ = Phone

# TD Mobile

- TD Mobile Java Interface
  - Beispiel: Setzen eines Browser Typs:



General	
Caption	Phone
CSS Class	
+ Margin	
Name	Ink2
Omit	<input type="checkbox"/>
Misc	
Justify	Left
Link	
Link Type	Web
Link URL	javascript:Td.Util.setDisplay("p")

# TD Mobile

- **Option:**
  - **Globale Variablen anstatt Parameterlisten**
    - **Pro:**
      - State Management wird auf dem Server ausgeführt
      - Keine Parameterlisten, einfache Handhabung
    - **Cons:**
      - Beim Seitenwechsel muss immer eine Operation ausgeführt werden, damit Daten angezeigt werden können.
      - Parameterlisten können direkt von Bindings in Objekte geladen werden.



# TD Mobile

- **Option:**
  - **Web Seiten Entwicklung mit TD Mobile**
    - Unterschiedliche Layouts für Smart Devices
    - Anwendungen und Web Seiten
      - Unterschiedliche Inhalte / Aussehen / Funktionalität
      - Unterschiedliche Stylesheets
      - ...



# TD Mobile

- Zum Schluss...
- Änderungshistorie:



**IslandDemo.apx**  
Path: D:\Roadshow\_2013\Island\  
Created: 11/13/2013 1:34:10 PM Last Change: 11/13/2013 2:09:57 PM

Library Status  
Library contains modifications.  
Click Save to save changes or Discard to revert changes

Save Discard

Current Modifications

- editEmployee
  - Contents
    - dfFirstName
    - cmbDeptID
    - bgI2
  - Bindings
    - EMPLOYEE
    - EMPLOYEE\_PHOTO
  - Login
    - Bindings
      - USER\_ID
      - LOGIN\_STATUS
  - CompanyInvoices

Change History

Track Changes  Prompt for Description

11/13/2013 2:09 PM: Helmut -  
9/27/2013 6:30 PM: hdelorenzi  
9/27/2013 6:26 PM: hdelorenzi  
9/27/2013 6:24 PM: hdelorenzi  
9/27/2013 6:22 PM: hdelorenzi  
9/27/2013 6:19 PM: hdelorenzi  
9/27/2013 6:17 PM: hdelorenzi  
9/27/2013 5:54 PM: hdelorenzi  
9/27/2013 5:53 PM: hdelorenzi  
9/27/2013 5:52 PM: hdelorenzi

# TD Mobile Ein Beispiel



