#### **Design Considerations**

"Simplifying the creation and controlling the use of SQL against a Progress database"

#### Restricting what users can see

and a finance	F	Addated (	Addiso.2	Addisor/3 Pos	Code Telephone I	EVG	Dourag	6	T.4.12			I edi
contribui Brannanic 32305 Quincea	Fundation Sonano Estado	Coll 453 A A	Bug thê ch	- 40000-72 - PON - 1425	Code Trefet-She T 54 148244447	EVC N. Luit quécie :	Supplies	Concrete	TWUISS	57.44 127.44	00.00 (00.00) 57.66	
300.1	SATEN EVAN			Mage 1050101126				UED	-			
47454 D - Male	R DU	de Blaendsverres von Frankrigen Frankrike	Diblectede B. mar Sine C.A.B.	Naure 00015-120	CUSYUT147572 541 - APER602	biblioxes/*sode	Algenina -	GLP	-	57282	573 964	
					1911 - Antreas A	-	Augustine Augustine	0.P	-			
118:5: 0, 500 05111, 1-976-11	Add: 1 Vicuel	Archales 2032 114 Sinder 0100 7c	1420 EUCYDS Auco Deenno Alexa	1475	51.1472/27	ade coulactes/X	sigenina	G:P	-	100		
				11.5		rág. a politica pre	Arpenina	67P	-			
118ee Valuenado	June	Just Evaluate 2421	1142. Louis and Ann		114 512 501 415	produce to com	Agentos		-	Too be	Testee -	
1100 / Prophes	kala -	1 10020	Bostow Lets	3 chiwa (111	+ 1 AB2 (BF2)	Lido to poet@html	- Industry	- <b>- - - - - - - - - -</b>	-	10.15	11 * *	
13788 Husen	R	MEQUALIQEM.	Subili	V-4 5008	8.935 COI		Aust al 1	16 P	-	40.42	45.42	
11/8 04-44	lenny	OF A from SI	L extrem	Visite 172	1109011-05	penetry has very (g)	- Industry	GSP	-	41.2	47.7	1
00520 kol	Euger	ISHUMU: Group	Teo .	E CI Victoria	99030029	coger tabilities	Aust die	11 11		602075	6020,75	
1142 C. 1. # # 45	Paul	621 51 51	Linnonn	vásina e	11 12/12/1	In a leaderstagen	- Industry	GEP	-	11.15	4/1 *	
10945 File (ra	Alle -	47 Goldfind	h frantic	Viet al., 2020	C554435745	nnan Siriti	Aust al	G.P	- C	151,25	-12-	
1200.1 lekingrah	Chi stopinen	W Lascoe Used	Hentone	- XKIOLE	0.1572.001	de lang rem09be	Australis	6PP	-	4.0.	43	
010 5 5-7-	F: li-	ICP Cluster Pre-	h. Inade	- Kell 1994	E 33/E 0720	et-y-£trikel a	Capital -	G.P	-	877 5	817.9	
T14/25 Huak	Paly	Nortali Contri HHS	TUNE Schulling	- Enderse	0407133046	manuf 10532	Aud alla	67P	-	No. So	Louise	
11/575 Mideox	Charine	101 Freinder Dreft	Lookener (2551		+11.194133331	de cine⊘r riva	e lectores	G:P		्यत्रभा	41040	
24744 Hube	Blowe	251 contraction	Succes	t-Ant Aurodia 6164	CE 9351 2475	hope edsörgere	Aust al c	01P	-	435 C3	438.03	
CC1/-4		<ul> <li>Information Devolution</li> </ul>	Travel use 01,000	konsthill nastaly		medicast concore	e locioare.	GSP	-	05.35	151.5	
46067 Canalor	Association (Contraction)	16 Guider H. Bulke	Lundin, Place	- Vieturu 3, 39	(8) 379673515	an wwx2big	Aust al c	6.0	-	8.3	91.3	
100 work	Drivity	- 40.1 metrodinen Avven	direction of the second	1 5 m wei	1, 941 (1, 162	Mig 24 groups of	conduction in	GSP	-	21 I I	Z 1	
4583 🔞	Pida	Troducere 34a 17	Vitar J 1, 20		CO43 554 444C5	n den a	Aust in	11.12	-	223.65	225.2	l.
116 verbekse	1:3	Scoperate expected in	A41.00	vien re	C.101 1.5 J.04	le ment/right si nel	AUS <sup>1</sup> 16	GEP	-	- 651 C.L	Utin.	
11074 50.000	Kan	i ke tali An Maria I	Vier-	1771	0143 576 337 / 1	di baar - Comi	Juod ia	G.P	-	- 41	917	
1059cs skap	Elisabelh	Horo: Haro 4/29	4101 J. 946#		UL431 Casilo4 o	sitcle@9ulanel.cc	ausha	6ªP	-	1520.7	220.7	
247 Interview	Human Finders	Certainguestel 20	C 100	(° )	0140601-01951	harten antenen	Andria	G:P	-			
17373 Luon	N.L.I	CLUCIM 34	Fightbog (	4232	C043664 322 4	manadata Seta	Aut ia	OTP.	-	160.00	50.00	
11-01 Henderlist	N IN	Signation with the	lithin text	Lengeve 1	1.410.01080	http://www.	and the	GEP	-	702-12	4171.7	
18760 Sign -	Classia	Buero fai Penselo s	Наварият.	Hudag, rean 40	<ul><li>43 660 304000</li></ul>	et, gie Øpeiste	Aut ia	6.12	-	285	285	
222 Index of	Henria	Costinger worker	APPENDA MA			inenderson unler	cardine -	GEP	-	14	11	
18238 D-0 (a C)	Sy -iu	Bibmaalson Ar778	A DIOV crass		5 2 27 37	No. Sec. Jak	Aut in	6.11	-	1233.7	230.7	
11001: ruer	L nec	Cenzgade 100	11.UHer			Inec InterMone	-rusina	GEP	-			
500027 I i -	Ambran	Bar and ASAMA	Viar	1220	01756 415 0012	>: mu: 13 <sup>55</sup> /2	Audio	G.P	-	2.55	2:0	-

Some users cannot see the financial info others may be restricted by country



Drill down to details

A quick look at the number of queries in an application

- Embedded in code 'AHSSQL=' 7760 queries
- Forms 376 x 5 (SELECT, UPDATE, DELETE, APPEND, RECORD COUNT) = 1880 Queries
- Saved = 1691 Queries
- Reports 795 Queries
- Combos 400 Queries (estimated)
- TOTAL 12526
- Though most queries are simple some are not. Using a query designer I would be happy to produce 16 Queries/day so without the business logic etc we are talking 783 man days. That is the best part of 4 years work on SQL alone!

# Elements common to pretty much all database applications

- Security model. Controlling user access to data.
- **Navigation.** Finding specific data within a database and displaying it.
- Editing. Having found data providing the tools alongside for editing, adding to other lists etc.
- Import and export of data in a range of formats.
- **Document management**. The ability to associate external files with records within the database.
- **Reporting.** Ad hoc reports, documents such as invoices and manifests, Management reporting.
- Scheduled and event triggered actions against the database.
- Diary/Notice board
- License Management
- Data Baskets

### Aims

- The environment should simplify the production and management of all the SQL within an application
- The user interface should be small, fast, flexible and be the same for all types of users
- The structure should enable WEB browser and mobile device versions to be developed as needed

#### Architecture



## A single User Interface

- Users can (within their accessible data), decide what fields they see, filter and save filters, add, update, delete records and set their own defaults, perform the actions on data with the tools provided.
- Administrators control who can see what and what they can do to that data (DAL)
- Developers can add functionality, business rules etc (BLL)