



## Gryphon Time & Attendance - Features

The *GryTNA* application is a means of interfacing data collection devices to a payroll system such as Frontier's chris21 HRIS. It can take time and attendance feeds from timeclocks, biometrical devices, telephone systems, web based timesheets, or spreadsheets and interpret the data to provide an input file into typical payroll systems (Quickbooks, MYOB, chris21, etc).

It is written in an Australian software database management language known as SIR but requires little to no understanding of the database structure as the operation is transparent to the user. From a payroll perspective the system is hidden from both the employee and payroll operator. All operations are undertaken as scheduled tasks.

*GryTNA* can be retrofitted to existing payrolls and data capture devices such as timeclocks but the more seamless and feature rich application is derived as a complete package using CStime clocks and Frontier Software's chris21 HRIS. It is currently operating in one of the larger private multi-campus hospitals in Australia and a large international charitable organisation.

While *GryTNA* is not designed to compete with a dynamic rostering system like Kronos or RosterOn it does use the same interfaces to HRIS. It is however a very cost effective means of providing the time and attendance data and basic award interpretation components of these systems particularly in the health sector. The cost is around one tenth of the equivalent dynamic rostering system, has proved to be extremely reliable and requires a minimum of intervention.

### Features

#### **Archiving**

The system automatically archives employee records older than 3 months where the system is configured for daily attendance loading. This is unnecessary for a pay period processing configuration. Because the database journals every transaction the journal file will get very large if it is not maintained. Again these operations can be scheduled and occur behind the scenes.

#### **Award Interpretation**

The system employs two methods of analysing the captured attendance times. The first is by matching the times worked with predetermined shifts. Each shift has the requisite penalties applied. There can be very large numbers of shifts – a distinct shift for each award, work pattern and sometimes classifications. The other is by writing rules that are applied to the times worked. These are produced in SIR's procedural query language (PQL).

#### **Chris21 TCB Output**

The chris21 output format is of the form below. The TCB is quite flexible and can accommodate leave records as well as payroll fields.

12	SFX	001102	1	N110509	1001	1355000800+	07:24	-	15:54
2	SFX	001114	1	N110509	1001	1815000100+	00:00	-	20:01 *
2	SFX	000112	1	N110509	1001	2385000760+	07:50	-	16:04
2	SFX	000112	1	N110509	3903	2385000100+			
23	SFX	001125	1	N110509	1001	1365000800+	07:46	-	16:35
23	SFX	001125	1	N110509	3903	1365000100+			
9	SFX	001127	1	N110509	1001	1280000525+	15:48	-	21:02
9	SFX	001127	1	N110509	3031	1280000100+			
9	SFX	001127	1	N110509	3903	1280000100+			
11	SFX	001129	1	N110509	1001	1355000760+	06:51	-	15:00

## Clock Installation

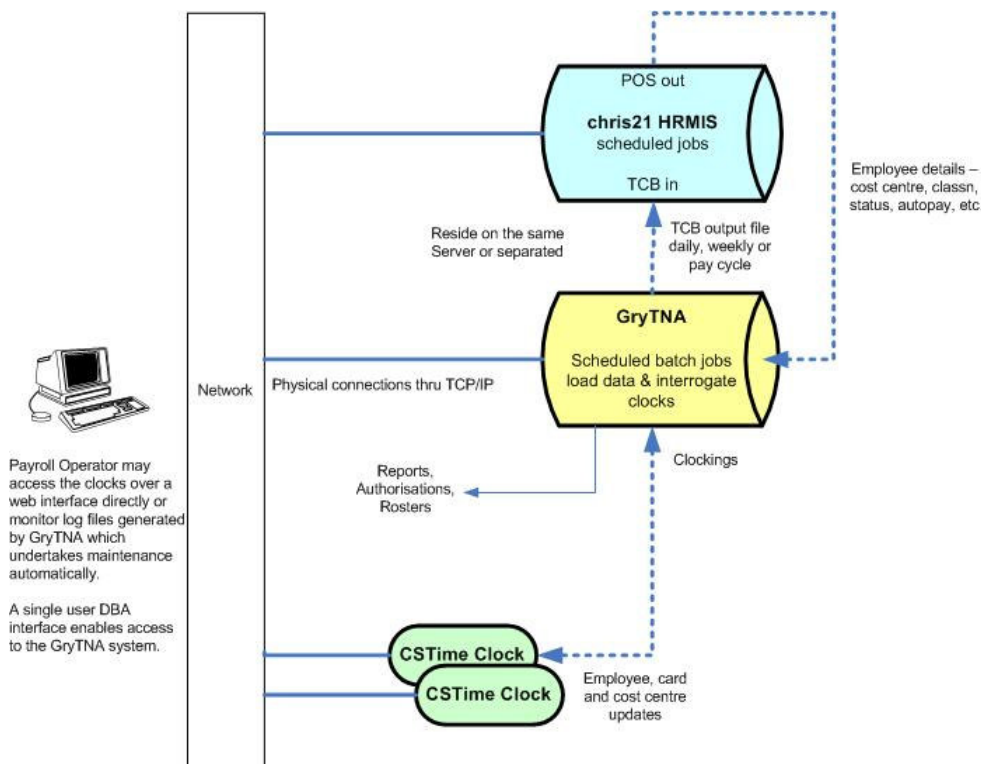
Most clocks have a TCP/IP connection allowing communication with the clock. Therefore there is a need to provide a RS422 and power connection to the point where the clock is installed. In cases where the clock needs a database (like OC500, IdTek, etc) the database resides on a server and processes either manual or scheduled are started to interrogate the clocks. It is usual that the clock is maintained through these databases (loading employee names, fingerprints, cost centres, etc).

## CSTime Clocks

The difference between the CSTime clock and others is that *GryTNA* have been able to work with the suppliers to provide an interface that employs no third party database to complicate the process. The Time Clocks (whether finger scan or proximity card) can be maintained without operator intervention.

Normally timeclocks are loaded with fingerprints or employee details through some form of interface attached to usually a MS Access database. In other cases a web application is used and the clock is populated with the employee details manually through this interface. The GryTNA CSTime combination has avoided these activities which are often laborious and, depending on staff turnover can consume many hours in maintenance. Virtually all this labour, and inevitable errors involved are removed by the GryTNA system. In this case the clocks are maintained by the database which in turn is maintained by the payroll system.

Frontier's chris21 provides a nightly dump of data (about 10 fields) for all live employees. This information (awards, classification, employment status, cost centres, etc) is used in the award interpretation process but also to keep the clocks populated with up to date data. As the data is downloaded it also updates or adds new employees to the clock databases. All that is required is to register a card (or finger) against the employee who has already been added to the clocks internal database. While this may appear trivial it does save a lot of effort and anxiety in ensuring that the clocks are synchronized. Similarly the system automatically deletes the card record from the clocks on termination ensuring no overpayments. The CSTime clocks may also be used for security measures by adding an appropriate relay and door locking facility. The proximity card or finger scan can then be used for authorized access. Again it is possible to program the clocks for access to different areas within the premises.



## **Dates**

The system works out the day of the week, date, pay date, period end date, etc – then looks at the public holiday list, also checking the next day for a public holiday, etc – ie setting the environment including setting the Weekend Worked flag if an employee has worked either the Saturday or Sunday. Processing occurs in the morning for the previous day but importantly picks up clockings in the current day to accommodate night shifts.

## **Daily/Pay Period Processing**

Some clients like to analyse labour costs on a daily basis which means that processing has to be daily while others store data and run the process once a pay period.

## **Daily Processing**

This configuration produces a daily payroll input file that is loaded into the payroll while at the same time producing a daily management spreadsheet listing employee times for authorisation.

## **Delayed Processing**

The system allows the deferral of pay where the times entered have not been authorised or verified. The transactions are “parked” and processed in the next scheduled pay run.

## **Disaster Recovery**

The SIR database has numerous security and database management features. The journaling referred to above can be turned off but it does have the advantage that in the event of an IT crash the database can be restored to its condition at the time of the crash.

## **Dumb Rostering**

This term relates to providing a forward looking roster based on past times worked. Because most rotating rosters are prepared on the same work pattern the *GryTNA* produces a populated roster for the next fortnight.

## **Email Distribution**

The GryTNA system holds the email address for each cost centre which is used to generate a command line used by a shareware program (*postie.exe*) which does the emailing. In other installations the spreadsheets are deposited in a shared directory or employ a program written in jcaps or other software to achieve the distribution (up to 999 emails).

## **Error Logs**

A series of error logs are produced during the analysis phase many of which contain warnings rather than errors. Warnings are produced when the system cannot match times (ie the outgoing time may be reversed with the incoming).

```
**** No shift able to be found so forcing a shift for Empid# 1127
**** Empid# 1136      appears to have times reversed - fixing -           please verify
**** No shift able to be found so forcing a shift for Empid# 1136
**** No shift able to be found so forcing a shift for Empid# 150053
**** No shift able to be found so forcing a shift for Empid# 151432
**** Finish of previous day shift 151955      started at 220645 OUT_ENTRY Ignoring this record for today!!
**** Empid# 153338      appears to have times reversed - fixing -           please verify
**** Processing next day records for Empid# 154547      found 070216
**** No shift able to be found so forcing a shift for Empid# 155330
**** Finish of previous day shift 160067      started at 212556 IN_ENTRY Ignoring this record for today!!
**** Empid# 160111      appears to have times reversed - fixing -           please verify
**** No shift able to be found so forcing a shift for Empid# 160133
**** Finish of previous day shift 160210      started at 215013 OUT_ENTRY Ignoring this record for today!!
```

## **Interpreting Times**

The times are usually rounded to the nearest 5 or 10 minutes, special conditions identified and numerous tests undertaken to choose the most appropriate shift. Up to ten tests are applied in trying to match a shift to times. The tests commence with matching the in and out times to the windows specified for the shift\_id and day of the week. It progressively broadens the criteria by searching all weekdays/weekends and window times, then shift\_ids finishing up with a forced selection based on the start time.

## Leave Processing

Where there is provision for capturing leave applications as part of the time clocking process (eg Web entry) *GryTNA* can pass these transactions through to chris21

## Management Authorisation

At the time that the payroll file is processed a spreadsheet for every cost centre is produced listing all employees and their times. This sheet is automatically emailed to the nominated manager for authorisation (noting leave, allowances, approved overtime, changed shift, etc). This is emailed back to payroll for adjustment in the FTE/TIM screen (chris21).

xxxxxxx@zzzzzzz.com.au

Please return to Payroll with corrections marked by 11am Thankyou

5141 SOMEWHERE LOWER LEVEL Wed 20/05/2009											
Date	Act in	Act out	Adj In	Adj Out	Emp	Name	Normal Hrs	Unpaid	C Classn	Status	System Co
20/05/2009	21:13	21:13	0:00	21:13	2757	xxxxxxxx	Missing	0	5141 AW6P5	Part	
20/05/2009	7:02	14:45	7:00	14:30	161371	xxxxxxxx	7	0:15	5141 AW6P1	Part	
20/05/2009	6:57	14:56	7:00	15:00	4288	xxxxxxxx	7.5	0	5141 AR4N5	Full	
20/05/2009	6:50	14:40	7:00	14:30	4927	xxxxxxxx	7	0:15	5141 AEN1	Cas	
20/05/2009	15:43	20:03	14:30	21:00	161473	xxxxxxxx	3.75	0	5141 AEN2	Part	
20/05/2009	7:02	14:42	7:00	14:30	4903	xxxxxxxx	7	0:15	5141 AW6P5	Part	
20/05/2009	6:59	13:15	7:00	14:30	3116	xxxxxxxx	5.75	0	5141 AW6P5	Part	
20/05/2009	14:35	22:24	14:30	22:00	2710	xxxxxxxx	7	0:15	5141 AEN5	Part	
20/05/2009	14:32	22:00	14:30	22:00	160169	xxxxxxxx	7	0	5141 AEN1	Part	
20/05/2009	14:38	22:15	14:45	22:15	161012	xxxxxxxx	7	0:15	5141 AR4N1	Part	
20/05/2009	14:16	22:00	14:30	22:00	880	xxxxxxxx	7	0:15	5141 AEN5	Part	
20/05/2009	14:21	21:12	14:30	21:00	746	xxxxxxxx	6	0:30	5141 AEN6	Part	
4023	xxxxxxxx						No Shifts		5141 AW6P6	Part	
160450	xxxxxxxx						No Shifts		5141 AR4N2	Part	
160708	xxxxxxxx						No Shifts		5141 AEN2	Part	
2553	xxxxxxxx						No Shifts		5141 AR4N2	Part	
2568	xxxxxxxx						No Shifts		5141 AEN5	Part	
802	xxxxxxxx						No Shifts		5141 AW6P5	Part	
162183	xxxxxxxx						No Shifts		5141 AW6P1	Part	
160475	xxxxxxxx						No Shifts		5141 AEN1	Part	
845	xxxxxxxx						No Shifts		5141 AW6P5	Part	
801	xxxxxxxx						No Shifts		5141 AEN5	Part	
812	xxxxxxxx						No Shifts		5141 AEN5	Part	

Mgr Adjust

Worked Hrs Code		Leave Code		Penalty Code	
Code	Desc	Code	Desc	Code	Desc
AM	AM Shift	AL	Annual Leave	OC	On Call
PM	PM Shift	SWC	Sick with Cert	RC200	Recall 200%
ND	Night Duty	SWOC	Sick without Cert	RC250	Recall 250%
ES	Early Shift	FAMILY	Family Leave	PRC	Phone Recall
OT	Overtime	LSL	Long Service	COS	Change of Shift
TOILA	Time in Lieu Acc	STUDY	Study Leave	IC7	In Charge 7%
DUAL	Dual Contract	TRNG	Training Lve	IC10	In Charge 10%
		CONF	Conference	NAU	Nauseous
	Example	MNGT	Management Day	CLASS##	Pay Classn
	8.0 AM	COMP	Compassionate	CC#	Cost Centre
	12.0 ND	TOILT	Time in Lieu taken		
	2.0 OT	ADO	ADO Taken		
	2.0 TOILA	WCOV	Approved Workcover		

Note that km cannot be paid via the T&A Report

## Multiple Clocks

No problems – each clock has a unique TCP/IP address which is accessible by the GRYTNA database.

## Multiple Shifts

Within any 24 hour period a person may work multiple shifts or may attend for a meeting, go home then come back 4 hours later to commence a normal shift. Up to 3 occurrences (ie 3 clocking on and off) in the same period are dealt with in *GryTNA*

## Night Shifts

Where nightshifts occur on Friday and Sunday it is necessary to split the shift to allow for weekend penalties to be applied to only that period before or after midnight. This is written into the shifts so no operator action is necessary. In addition to the public holiday processing the system also deals with the next day or the previous day being a public holiday for correct night shifts penalties.

## Overtime

Overtime is only paid when it is authorised by the Manager on the relevant report. It is however calculated and provided on the Payroll report.

## Pay Period Processing

The system is configured to either load times daily or sit dormant until a day before pay day when it awakes, processes the periods pay, produces reports and loads the interpreted information into the HRIS

## Payroll Report by Cost Centre

A text/pdf payroll report sorted by cost centre is generated that has a full breakdown of the staffing and wage components payable from the system including staff who did not work in the period.

Employee Number Name		Day	-Actual- Start Finish		Shift	-Adjusted- Start Finish		Less Meal	Net Time	Description	Code	Units	Char
Cost Centre 1260 3 WARD 3													
160775	XXXXXXXXXXXXXXXXXX	Mon	21:17	07:29	22517	21:30	07:00	30	09:00	Ordinary Hours	1001	9.00	1 22 CR2N1
		Mon							00:45	Unpaid Hours	1032	0.75	
		Mon								Laundry	3903	1.00	
		Mon								Might Shift - Perm	3033	1.00	
		Mon								P.Hol 100%	4102	9.00	
6797	XXXXXXXXXXXXXXXXXX	Mon	07:36	14:37	08173	07:00	15:06	30	07:36	Ordinary Hours	1001	6.50	2 3 CEN3
		Mon								Laundry	3903	1.00	
161859	XXXXXXXXXXXXXXXXXX	Mon	06:36	15:10	20827	07:00	15:06	30	07:36	Ordinary Hours	1001	7.60	2 22 CR2N1
		Mon							00:30	Unpaid Hours	1032	0.50	
		Mon								Laundry	3903	1.00	
		Mon								P.Hol 100%	4102	7.60	
197	XXXXXXXXXXXXXXXXXX	Mon	06:45	14:59	10173	07:00	15:06	30	07:36	Ordinary Hours	1001	7.60	1 4 I8H5
		Mon							00:09	Unpaid Hours	1032	0.15	
		Mon								Laundry	3903	1.00	
		Mon								P.Hol 250%	4103	7.60	
160145	XXXXXXXXXXXX	Mon	07:58	14:03	08172	07:00	13:00	0	06:00	Ordinary Hours	1001	6.00	2 4 I9H3
		Mon								Laundry	3903	1.00	
233	XXXXXXXXXXXXXXXXXX	1											NO SHIFTS RECORDS
161597	XXXXXXXXXXXXXXXXXX	1											NO SHIFTS RECORDS
161598	XXXXXXXXXXXXXXXXXX	1											NO SHIFTS RECORDS
161552	XXXXXXXXXXXXXXXXXX	1											NO SHIFTS RECORDS
Total transactions for Cost Centre 1260 is 47													

## Public Holidays

Public holidays are often problematic in 24/7 operations particularly because of the rules apply differently between classifications, weekend public holidays, substitutes and often differences between campuses of the same organisation. *GryTNA* takes account of these complexities although the number of shifts need to increase correspondingly. Where special arrangements apply like a particular classification can only be paid one of two public holidays should the employee work on both days the system determines the penalty to be applied. Night shifts also are challenging because the system needs to "look" forward to determine if the following day is also a public holiday.

## Public Holiday Not Worked

Most payroll systems have a requirement for a code for full time staff who did not work on a public holiday. The *GryTNA* produces an additional file for loading with the requisite code and 7.6 hours. A report is also generated as part of the process.

Inserted Public Holiday code 1008 into the following records (7.6 hr)  
for 10/04/2009

Emp ID#	Name	No Shift Worked	Emp Status	PH Date
Cost centre - 1065				
2899	XXXXXXXXXXXXXXXXXX		Full Time 1	10/04/2009
2244	XXXXXXXXXXXXXXXXXX		Full Time 1	10/04/2009
161833	XXXXXXXXXXXXXXXXXX		Full Time 1	10/04/2009
56855	XXXXXXXXXXXXXXXXXX		Full Time 1	10/04/2009

## SIR/xs

The latest commercial release of SIR, SIR/XS, includes full relational and hierarchical database structures, query language, reporting language, interactive and batch data entry facilities, 4GL, analytical procedures and graphical application development utilities.

## Special Reports

Reports are available that deal with autopay personnel (who may record times for time in lieu purposes but whose pay is unaffected by their attendance times recorded), contractors, nurse agency employees, etc.

**System Administration**

There are few tasks required to maintain the *GryTNA* system – maintaining the list of applicable public holidays is one, another is maintaining the list of email addresses applicable to cost centres. All other tasks are automated and the systems admin function is confined to checking logs and looking for trends where the shifts selected do not fit the work patterns worked. Manual overrides of the scheduled batch processes is available including the ability to run the payroll generation on a day other than that determined when the system is installed.

**Timeclocks**

While the system can take the output from any clock device many of the commercial products available employ their own MS Access database to collect and store the data. The recommended clock is the CStime series of clocks

**Treatment of Single Sided Entries**

Single sides transactions, those where there is only one clocking because the employee forgot to clock on or off, or it was a night duty where the employee finished after the cutoff are highlighted and given a duration of 1 hour. Without a quantum they would be overlooked. This usually occurs where processing is scheduled to read the clocks at around 8am - any registrations after 8am are missed from processing for the previous day.

**12 Hour Shifts with Changeover**

A particular difficulty occurs on night duty where the shift changeover occurs at the same time. Some clocks allow for a button to be pressed to indicate the start or end of a shift. People rarely use this facility so it is necessary to logically work out whether the registration is an in or out.

**Unauthorised Clockings**

Where the timesheet or times clocked are not authorised by the responsible manager it is possible to hold these transactions until the next scheduled pay run. This function is built into the system including reporting and warnings – in most cases this function is overridden

**Updates from HRIS**

Most clients provide a simple comma delimited file produced from the payroll system to maintain the employees within *GryTNA*. In the case of a chris21 payroll about a dozen fields from the POS screen are dumped every night from a scheduled task within chris21. These include the ID, name, cost centre, classification, pay point, award code.

**Web Timesheet Interface**

On line timesheet applications such as Replicon can be easily accepted as input to the *GryTNA* system whether to verify the selected wage code or to interpret the raw times entered.

**Web Report (comparing Replicon output)**

-----				-----							
xxxxxxxxxxxxxxxxxxxxxxxxxxxx				Calculated Casual Timekeeping Report							
-----				-----							
Calculated				Submitted							
RS12	13038	xxxxxxxxxxxx	RW1	****	4.00	090000	130000	20/10/2009	Tue	09:00-13:00	A
				****	1.50	110000	123000	27/10/2009	Tue	11:00-12:30	W
				****	4.00	130000	170000	27/10/2009	Tue	13:00-17:00	W
				****	2.50	093000	120000	28/10/2009	Wed	09:30-12:00	W
				****	4.50	123000	170000	28/10/2009	Wed	12:30-17:00	W
	13038	311009	RW1 CNOR 16.5								
	13038	311009	RW1 CSUN 4								
RS12	13040	xxxxxxxxxxxx	RW1	****	7.50	090000	163000	28/10/2009	Wed	09:00-16:30	W

**Why Proximity Cards/Fobs?**

The *GryTNA* system doesn't care where the data is derived. However, in a hospital environment the proximity fob/card appears to be the more acceptable and reliable for employees. The need for disinfectant, care in placing the readers, fingerprint identification, and processing speed is avoided.

**Notes:**

*Release 3.5*

Call Col Barling for further details 03 9878 6595 or 0407 766 996.