# A DETERMINISTIC STUDY OF THE FODA FRAME UTILIZATION AT VARIABLE BIT AND CODING RATES

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### A deterministic study of the FODA frame utilization at variable bit and coding rates (\*)

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### I. INTRODUCTION

FODA stands for Fifo Ordered Demand Assignment. It is a TDMA satellite access scheme, suitable for simultaneous transmissions of real time data and bulk data. It is able to compensate satellite movements and to efficaciously counter deep fades of the signal due to rain attenuation at high frequencies, while maintaining a good channel optimization even at reduced performances in terms of global capacity of the system.

The system is dimensioned to work simultaneously with a large number of stations, each of which is able to enter or to leave the network without disrupting its operations. As far as the assignments of the transmission time slots are concerned, the control is centralized; it means that at least one round trip delay time between requests of transmissions windows and their time assignments must be considered.

A version of FODA was designed and realized to work at fixed bit and coding rates at the frequency 12/14 GHz, using a prototype of TDMA controller manufactured by the MARCONI R.C. (U.K.) ([1], [2], [3]). This version of the system has been patented (patent N. 9373A/89) and it was first presented at the EUTECO Conference held in Vienna in April 1988 ([5]) and later at the Olympus Utilization Conference held again in Vienna in April 1989 ([6]).

Results rising from the simulation study and from real transmissions can be found in [4] and in [7].

The major drawback associated with frequencies over 10 GHz is the signal attenuation associated with rain fall. In general, attenuation at these frequencies is an increasing function of the rain rate and standard techniques might be employed to combat the rain effect (site diversity, frequency diversity, etc.), but unfortunately all these techniques are costly because permanently dedicated system resources are seldom used, i.e. when it rains, being the system over-designed for the clear air conditions that may exist more than 99 % of the time.

The FODA system will be used in the Olympus programme, working at 20/30 GHz frequencies, where the signal attenuation due to bad atmospheric conditions has a big impact on the quality (and sometimes also on the possibility) of the transmissions. Therefore, the architecture of the original FODA system needed to be reviewed by modifying the numeric value of some parameters and adding more functions in order to counter fades. The different features of the new prototype of TDMA controller, also including the variable coding rate codec and the variable bit rate modem, were considered. The hardware prototype will be manufactured again by the MARCONI R.C and should be, hopefully, ready in the third quarter 1990.

Among the many possibilities to cope with fade conditions on a satellite link, the variation of the data coding and, eventually, of the transmission bit rate too is the procedure the FODA system is based on to counteract fades.

### 2. A SHORT ACCOUNT OF FODA

For any description of the FODA system see references. In the following, the most important points are briefly resumed.

- 1) The control is centralized (master station).
- 2) The FODA time frame is 31.25 ms long.
- 3) m frames constitute a superframe. (m>=1).
- 4) In the FODA frame, 4 sub-frames are distinguishable: the reference, the control, the stream and the datagram sub-frames.

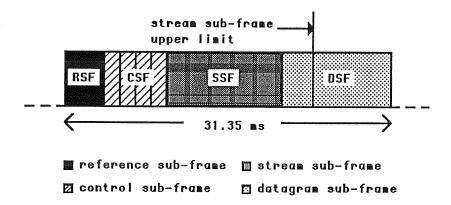


Fig. 1 - Frame structure

The first one is used by the master to send the reference burst; the second one is sharable among the slave stations according to an algorithm which allows up to 4 stations to use it in the same frame; the third one is reserved to the stream traffic and the last one to the datagram traffic. The stream subframe may or may not be present according to the presence or not of stream traffic. If present, it starts immediately after the control sub-frame and has two different moveable upper limits in the frame, used for different conditions as explained later on. Datagram traffic may be sent by a station in its stream transmit window during absence of stream traffic (like during the periods of silence in the voice transmissions). The datagram sub-frame starts immediately after the last stream allocation and, in any case, not farther than the current upper limit of the stream sub-frame. In absence of stream allocations, the datagram sub-frame starts immediately after the control sub-frame, till the end of the frame.

5) The structure of each FODA traffic burst is shown in Fig. 2, being the traffic burst defined as the number of bits the user sends to the satellite when the relative transmission window opens. Each traffic burst consists of one or more sub-bursts.

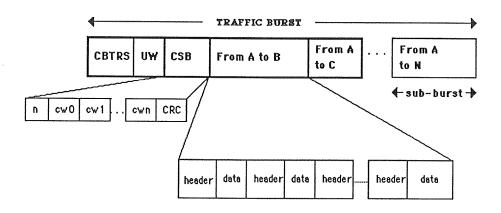


Fig. 2 - Traffic burst format

The first two fields are the CBTRS (Clock and Bit Timing Recovery Sequence) and the Unique Word which constitute the *preamble* of the traffic burst, *always sent uncoded*. It may have a variable length (number of symbols), according to the used bit rate. The preamble bit rate, at each incoming burst, must be known by the modem which is driven by the TDMA controller. Therefore,

the preamble bit rate must be the same for all the bursts sent by all the stations. A technique is foreseen to change the preamble bit rate on a superframe basis and to synchronize all the stations on the changing time. The preamble is, unfortunately, the most significant part of the frame overhead: the smaller the overhead, the more efficient a TDMA system is, but there is a lower threshold below where the modem is no more able to acquire data. This is due to the difficulty by the modem to rebuild the carrier and the data clock signals in a short number of symbols, when the signal-to-noise ratio is below a certain threshold.

The control sub-burst (CSB) describes the following traffic sub-bursts, therefore its length depends on the number of sub-bursts constituting the traffic burst. In the control sub-burst, the length, the bit rate and the coding rate of each sub-burst is specified. The CSB bit rate is the same as the preamble one, while the encoding rate is the maximum one, to increase the protection. It must be outlined that

a corrupted CSB obliges us to discard the entire data burst.

The header sub-burst contains the 18 8-bit bytes header of the satellite network. It describes the source, the destination, the length of the following data together with other information necessary to correctly reassemble eventually fragmented data, whose original length can assume any value. The header also contains a field usable to enter new requests or updates of previously sent requests for transmission time slots either in the stream and/or in the datagram sub-frames (request piggybacked with data). The header bit and coding rates are specified in the control sub-burst, together with the bit and the coding rates of the data sub-burst(s) the header refers to.

5) The stream request is made only once, on the basis of multiples of a basic unit called elementary slot (time allowing the sending of 16 8-bit bytes, after eventual coding), corresponding to a throughput of 4 Kbit/s (stream channel). The assignment is intended to be granted for each frame of the superframe and valid until updates of the request are received by the master. Updates take place starting from the first frame of the next superframe. Stream channels allocated to a station are released when a station sends a relinquish request or when a station is declared dead by the master. In both cases, starting from the next superframe, if no new stream requests are received, the datagram sub-frame is enlarged as a result.

The overhead of the stream transmit window, translated into a number of elementary slots, is added by the slave station to the global stream request sent to the master, being this request the sum of all the requests for stream channels coming from the n stream applications in some way connected to the station. New stream requests are accepted up to the upper limit of the stream sub-frame, which is normally fixed to half the space in the frame after the RB and the CSF. When fades have to be countered, this upper limit can be moved ahead, occupying up to 3/4 of the frame and squeezing the datagram sub-frame just to contain the <u>already assigned</u> enlarged stream channels. New stream requests are not accepted when the stream sub-frame is enlarged.

The normal limit is reached again when the fade situation overcomes.

The datagram request, made on a prevision basis and frame by frame, must be expressed on the basis of multiples of the elementary slot. The assignment, not guaranteed in each frame, is a percentage of the request (from 10% as lower threshold up to 50% as upper threshold, according to the number of active stations). At each assignment, the assigned quantum is decreased from the requested one. The overhead of the datagram transmit window, translated into a number of elementary slots, is added by the master to each assignment.

N datagram allocations as maximum in a frame do not mean that only N stations may send datagram traffic, but that only N, as maximum, can be accommodated in each frame. Therefore, 4N stations transmitting datagram traffic are scheduled in 4 frames, being allocated spaces for N stations in

each frame.

### 3. THE "CLASS OF SERVICE" PARAMETER

It is assumed that any application running on a host in some way connected to the satellite TDMA controller (usually via a fast LAN), on which the FODA system runs, specifies the *class of service* (COS) of the data to be transmitted on satellite.

The class of service parameter (COS) in the FODA system is only the requested range of bit error rate (BER). Other parameters, which normally play an important role in characterizing the quality of the service requested between two end-to-end applications (like the typical data delay and the maximum jitter of the packet inter-arrival time) are really not negotiable. In fact, as far as the stream is concerned, the delay depends on the round trip time (in turn depending on the geographic position of the station) plus a fraction of the time frame. The maximum jitter can be assumed one frame long. In case of datagram, both the delay and the jitter depend on the overall traffic conditions and on the saturation control mechanism.

The BER, on the contrary, is not related to any external factor but must be specified by the application, using a table associating a BER range to a class of service, like, for example, the one shown in Table 1, which our study is based on.

	BER		
COS	not >	not <	Examples of TYPE of DATA
1	-8 10		reference burst; broadcasted control information; control sub-bursts; satellite headers
2	-7 3 ± 10	-8 10	reliable data: bulk; special voice/video interactive data
3	3 * 10 <sup>-5</sup>	-7 3¥10	standard voice/video
4	10 <sup>-3</sup>	-6 3¥10	degraded voice

Tab. 1 - The COS indication

### 4. THE REDUNDANCY FACTORS.

When the necessity arises to compensate an increased attenuation of the signal in order to maintain the class of service required by the application, it is preferable to increase the coding rate of the data first, taking advantage of the coding gain with respect to reducing the bit rate.

Let's indicate with Ri (redundancy information) the ratio between the time necessary to send a certain amount of information at a certain bit and coding rates and the time necessary to send the same information at the maximum speed (8 Mbit/s) and uncoded (best conditions). Ri can be expressed as the product of two other redundancy values: the coding redundancy Rc and the speed redundancy Rs. The coding redundancy is the inverse of the used coding rate; the speed redundancy is the ratio between the maximum bit rate and the current one. The goal is to maintain Ri as low as possible, while countering the declared fade level. This one is measured in dB and is defined as the offset between a reference value of Eb/N<sub>0</sub>, fixed to 12 dB (allowing the reception of uncoded data at 8Mbit/s with a BER of  $10^{-8}$ ), and the current value of Eb/N<sub>0</sub>. This dB offset represents also the

correction for the data in terms of coding rate and, eventually, of bit rate in order to maintain the requested class of service.

From Eb/N<sub>0</sub>-Table in Appendix, which shows the relationship between the Eb/N<sub>0</sub> values and the BERs, Ri-Table is derived, showing the relationship between the fade level and the Ri factor for all the four classes of service previously indicated.

A station in fade, once detected the dB fade level (the fade detection system is not a matter of this paper), broadcasts this information to the network. The compensation of a fade condition is translated into a request for a wider equivalent bandwidth both by the station in fade and by all the other stations wishing to send data to the station in fade. This enlarged request is due to the necessity to increase the coding rate (and, therefore, the Rc value) and, eventually, to decrease the bit rate (therefore increasing the Rs value) to improve transmissions in order to counter the fade. As far as the master station is concerned, the deepest declared fade must be kept in consideration for chosing the coding and the bit rates to send the reference burst. The chosen bit rate is called driving bit rate and it fixes the bit rate needed to send the preambles and the control sub-bursts of all the traffic bursts in the satellite network.

As far as data are concerned, the FODA system reacts to the increased request of bandwidth in a different way, according to whether the type of traffic is stream or datagram.

A stream application needs a preliminary phase in which a certain bandwidth is negotiated between the master and the station ([8)]. Once a stream request has been granted, the system tries to keep the links characteristics unchanged even in the presence of fade conditions. To counter fades, a station is obliged to increase the previously done stream request in order to maintain the already set-up sessions which now, due to the changing of the coding and/or of the bit rate, have a larger occupancy in the stream sub-frame. The master tries to grant the enlarged request at first within the normal stream sub-frame upper limit  $U_1$  and then, if there is not sufficient space, by moving ahead the stream sub-frame upper limit up to an  $U_2$  value, squeezing therefore the datagram sub-frame. The moving of the upper stream sub-frame limit from  $U_1$  to  $U_2$  is not allowed for granting new stream requests. This extended stream upper limit is put back to the normal position when the fade conditions overcome.

If the enlarging of the stream sub-frame is not sufficient to satisfy the increased stream request, the system notifies to the application(s) the necessity of reducing the used bandwidth. If the application can reduce the requested bandwidth (compressible application), the station begins sending data with reduced bit rate, while maintaining the requested class of service.

Incompressible applications are not guaranteed to maintain the requested BER under heavy fade conditions, especially if experienced when the system is strongly loaded.

As far as the datagram is concerned, fading conditions cause an increment of the real amount of data waiting in the system to be sent to satellite (backlog) and of the amount of the instantaneous traffic. This automatically increases the station request, making the attempt to get more bandwidth. Due to the increase of the request itself and/or to the eventual compression of the datagram sub-frame, the overall capacity of the datagram may result sensibly reduced, particularly under heavy load conditions of the system. An efficient action of the saturation control system, like, for example, exercising a back-pressure on the remote applications, is requested to avoid congestion ([4]).

### 5. THE FADE LEVEL CLASSES

On the basis of the class of service, the Ri factor may vary more or less quickly. Higher the class of service is, quicker the Ri increase is. In any case, whatever the class of service is, several fade levels can be supported without any coding or speed changing, as shown in Figs. 3, 4, 5 and 6 in which the fade levels, which do not provoke any change of the Ri factor, have been grouped into

classes from 0 to 10. These classes, in which no change of the Ri factor is requested, are called <u>fade</u> <u>level classes</u> (FLC) and the grouping of the fade levels depends on the class of service.

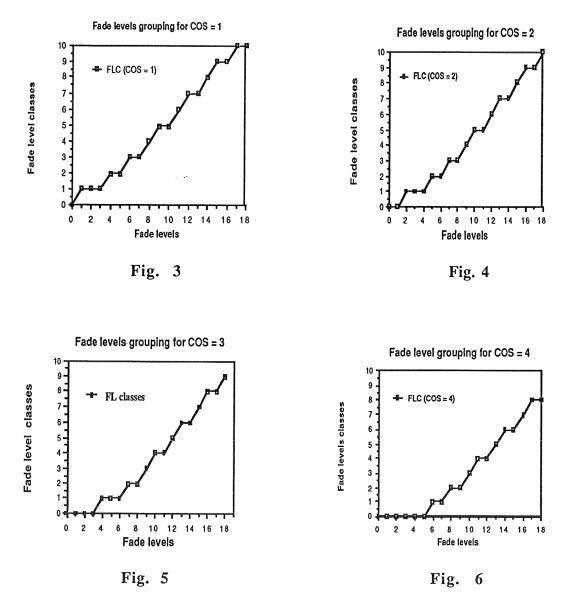
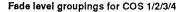


Fig. 7 is the sum of the previous four figures and it is the scenario of the fade level groupings for the four classes of service.



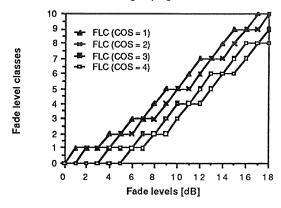


Fig. 7

### 6. THE HYPOTHESES OF THE STUDY

This study is aimed to give an idea of the FODA frame utilization when deep fade levels must be countered. The study is focused mainly on the stream sub-frame utilization. In the following, the assumptions taken are listed.

- 1) The considered bit rates are 8, 4, 2, 1 Mbit/s.
- 2) The considered coding rates are: 1, 7/8, 3/4, 2/3, 1/2.
- The preamble is considered 320 (CBTRS)+32 (UW)=352 bits long.

  Its length does not depend on the bit rate. On the other hand, its time occupancy doubles at each 1/2 reducing of the bit rate.
- 4) The control sub-burst (CSB) is assumed 1/2 coded. Its length depends on the number of sub-bursts in the traffic burst. Its bit rate is the same as the preamble one.
- 5) It is assumed that satellite headers and data be sent in the same class of service.
- The bit and the coding rates used for the control slots in the control sub-frame are the same as those used for the reference burst.
- 7) The control sub-frame consists of 4 control slots, each large enough to send a satellite header (18 bytes) plus a small amount of data (16 8-bit bytes).
- As far as the stream traffic is concerned, the computations are made assuming applications requiring a throughput of 64 Kbit/s.
- 9) Compressed applications are those which can pass from a throughput of 64Kbit/s to one of 16 Kbit/s.
- One stream application for each active station is considered. Therefore, number of supported stream applications = number of supported active stations. This is the worst case from the SRB occupancy and the frame overhead point of view, where, from here on, "worst case" means "most expensive in term of bits of overhead".
- The master station fixes the bit rate of the preambles and the control sub-bursts of all the data bursts to that one used to send the reference burst (*driving bit rate*).
- 12) Up to a maximum of 64 stations simultaneously active are considered.
- "Ĉlear sky conditions" means that uncoded data can be sent at 8Mbit/s maintaining the requested class of service. It corresponds to a fade level of 0 dB. The deepest considered fade is 18dB. The considered increment step is 1 dB.
- The stream sub-frame upper limit is moved ahead at least when the driving bit rate drops from 8 Mbit/s to 4 Mbit/s.
- 15) Guard times of 40 bits each are considered (unaffected by any Ri value).

- 16) Computations are all referred to the 8Mbit/s, uncoded case, i.e. the Ri factor is used to indicate the cost in time of a bit with respect to the 8 Mbit/s, uncoded case cost.
- The frame efficiency is defined as the *ratio* of the number of bits available for carrying *traffic* and the *total* number of bits available in the TDMA frame.

  It is expressed in percentage by the formula:

where:

$$\sum_{total \ overhead}^{n} = (RB + CSF) Ri + n G_t + n (P_b + CSB R'c) Rs + k=1 S_{hdr} R'i_k$$
(2)

being:

RB = reference burst bit occupancy (overhead included);

CSF = control sub-frame bit occupancy (overhead and 4 guard times included but

the space available for small data transmission excluded);

CSB = control sub-burst bit length; Shdr = satellite header bit length;

 $G_t$  = guard time, expressed in bits;

Pb = preamble bit length (always uncoded); n = number of data bursts in a frame;

Ri = Rs Rc = redundancy speed and redundancy code for the RB;

Rs = redundancy speed relative to the driving bit rate;

R'c = redundancy coding for the control sub-burst (normally 1/2 coded);

 $R'i_k$  = redundancy information factor for the k-th traffic burst.

### 7. THE REFERENCE BURST OCCUPANCY

Information regarding events changing on a superframe basis are contained in the superframe reference burst (SRB) only, while information specific of each frame are contained in the reference burst (RB). Both must be sent using an Ri factor suitable to counter the deepest declared fade. RB and SRB are always sent in class of service 1.

If superframe and frame coincide, SRB and RB coincide too.

The RB is sent at the beginning of each frame of a superframe, aside from the frame zero. It contains the datagram allocations for the frame plus information about the preamble speed. The SRB is the reference burst sent at the beginning of the frame zero of each superframe. It is composed of the RB plus a part regarding superframe information (SRBfix) plus the stream allocations of the superframe (SRBstrass). The part of the SRB exceeding the RB is supposed to cover the space devoted to the control sub-frame; it happens once every superframe:

In Fig. 8 the RB and the SRB formats are presented. In Figs. 8a and 8b the single parts are more detailed.

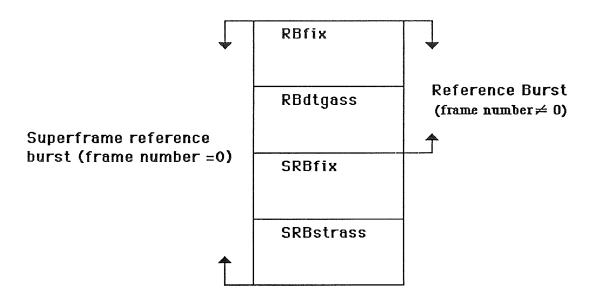
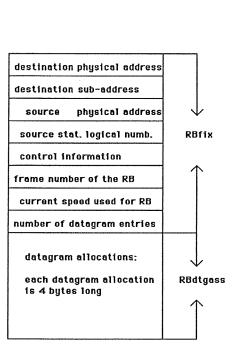
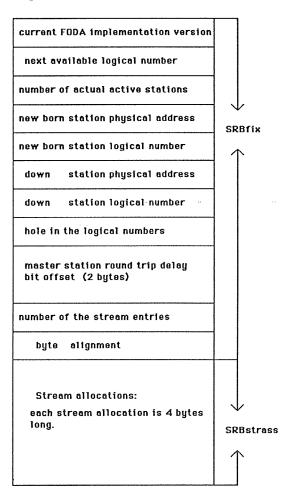


Fig. 8



RB = RBfix + RBdtgass Fig. 8a



SRBfix + SRBstrass Fig. 8b

Being:

SRB = RBfix + RBdtgass + SRBfix + SRBstrass,

the SRB bit length depends on the number of both the stream and the datagram assignments allowable in each frame of the the superframe.

8. FIRST HYPOTHESIS:

10 datagram allocations per frame. Incompressible stream applications

Stream sub-frame 1/4 enlarged from 9 dB of fade on.

In the RB-TABLES 1-4 in Appendix, the SRB occupancy is computed in terms of number of bits, percentage of the frame and milliseconds respectively when 32/45/48/64 stream allocations are considered and the RB is dimensioned to contain 10 datagram allocations. The used formulas are:

[bit] occupancy = 
$$(preamble + CSB) Rs + (S)RB Ri$$
 (3)

% of the frame = bit occupancy 
$$/ 2560$$
 (4)

[ms] time length = bit occupancy 
$$/ 8192$$
 (5)

where:

CSB = control sub-burst bit length, 1/2 coded;

(S)RB = SRB or RB bit length;

Ri = redundancy information factor of the RB (=Rs Rc);

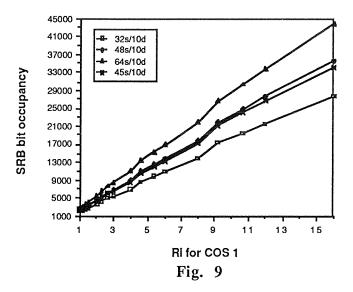
Rs = redundancy speed of the RB.

In Fig. 9 the *bit occupancy* of the SRB is shown. From the values available in the RB-TABLES those which would have provoked discontinuity on the line graphs (double points) have been discarded. In fact, for example, the value Ri = 2 can be obtained in two ways:

- 1) Rs = 1 (i.e. used bit rate = 8Mbit/s) \* Rc = 2 (i.e. used coding rate = 1/2)
- 2) Rs = 2 (i.e. used bit rate = 4Mbit/s) \* Rc = 1 (i.e. uncoded data).

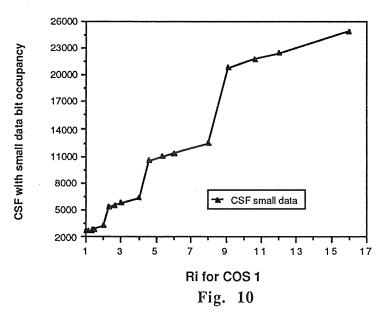
Between the two solutions, the second one is surely to be avoided. It is much better to reduce the coding rate, maintaining the same bit rate, rather than to reduce the bit rate and to send uncoded data.

#### SRB bit occupancy versus Ri



The CSF-TABLE in Appendix shows the occupancy (in [bits], [%] and [ms]) of the control subframe when each of the 4 control slots is dimensioned for a small amount of data equal to 1 Elementary Slot. On the basis of this table, Fig. 10 is derived.

### CSF bit occupancy versus Ri



Let us now make some considerations. At the frame zero of each superframe, the SRB is sent by the master station, at the most as large as the space occupied by the RB plus the control sub-frame. The RB, the SRB and the data in the control slots <u>must be always sent in class of service 1</u>. The possible bit and coding rates usable by the *class of service 1*, to counter up to 18 dB of fade, are shown in Tab. 1.

SPEED Mbit/s	CODING RATE	RI FOR COS = 1	FADE LEVELS
8	1	1	0
8	7/8	1.14	1, 2, 3
8	3/4	1.33	4, 5
8	2/3	1.5	6, 7
8	1/2	2	8
4	2/3	3	9, 10
4	1/2	4	11
2	2/3	6	12, 13
2	1/2	8	14
1	2/3	12	15, 16
1	1/2	16	17, 18

Tab. 2

In Fig. 11, the space available for the SRB in the frame is shown. It is obtained as the sum between the RB for 10 datagram allocations and the control sub-frame. It is then compared with the bit occupancy of SRBs computed respectively for 32, 45, 48 and 64 stream + 10 datagram allocations.

### Various SRB bit occupancy versus Ri

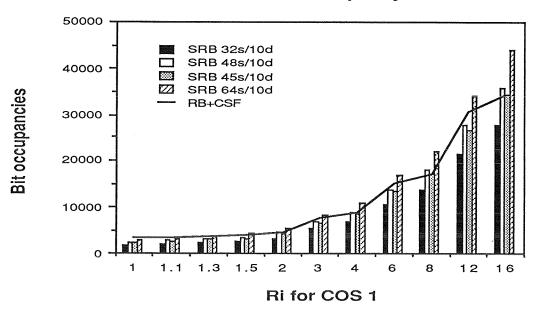


Fig. 11

From Fig. 11, it is clear that the SRB must be dimensioned for <u>45 stream allocations</u> in order to occupy the space of the RB + CSF at each Ri value of the COS 1. The problem is whether or not these allocations can be supported whatever the bit rate is.

Let 's compute the number of bits available in a 31.25 ms frame after the bit occupancy of RB + CSF (= SRB) in all the Ri cases foreseen by the class of service 1.

Ri	for $COS = 1$	RB+CSF [bit]	AVAILABLE bits	FLC for COS 1
	1	3492	252508	0
	1.14	3629	252370	1/2/3
	1.33	3813	252186	4/5
	1.5	3974	252026	6/7
	2	4456	251544	8
	3	7788	248212	9/10
	4	8752	247248	11
	6	15416	240584	12/13
	8	17344	238656	14
	12	30672	225328	15/16
	16	34528	221472	17/18

being 256.000 - (RB+CSF), for each Ri value, the total number of bits available for the two stream and datagram sub-frames. Each of them occupies half of the available space in the frame in normal conditions. When it is required by some fade condition, half of the datagram sub-frame is used to maintain stream allocations. It happens when the reference burst must reduce its bit rate from 8Mbit/s to 4 Mbit/s (i.e. from the fade level of 9 dB) and there is enough stream load to require the stream sub-frame expansion.

The formula used to compute the bit occupancy of n stream allocations (stream sub-frame bit occupancy SSF), each requesting a throughput of 64Kbit/s (=2048 bits every 31.25 ms), is the following, using the same notation as in (2).

$$\sum_{s}^{n} \sum_{k=1}^{n} (P_b + CSB R'c) Rs + n G_t + k=1 (S_{hdr} + 2048) R'i_k.$$
 (6)

The datagram sub-frame bit occupancy (DSF) with *m datagram allocations* is given by (7), while (8) gives the maximum number of bits of real data (mrd), overhead excluded, of each of the m datagram allocations.

$$DSF = m G_t + m (P_b + CSB R'c) Rs + m (S_{hdr} + x) R'i$$
(7)

$$mrd = [DSF - (m G_t) - m (P_b + CSB R'c) Rs - m S_{hdr} R'i] / m R'i.$$
 (8)

In (6), (7) and (8), the same notation as in (2) has been followed.

The Rs value used to send the preambles and the CSBs is determined by the bit rate used by the reference burst which, being the most important broadcasted message, is always sent in COS=1. Moreover, the RB must reduce its bit rate with respect to the reference 8 Mbit/s as soon as a station declares a fade level deeper than 8dB, according to the parameters of the class of service 1. It means that if the RB must be sent at 1Mbit/s, all the preambles and CSBs will be sent at 1Mbit/s (Rs = 8).

In Tab. 3, the maximum bit size of each real data of the assumed 10 datagram allocations is shown. The four values 1, 2, 4, and 8 the Rs parameter can assume (as far as the overhead increase is concerned) and the worst Ri-values, at each reducing of the bit rate, for datagram data sent in COS2 have been considered. Moreover, the datagram sub-frame is supposed to be 1/2 squeezed by the stream sub-frame starting from a fade of 9 dB on.

	Bits for the DSF	Max number of bits of real "data" for each datagram allocation
Rs = 8 dB range for COS1 = [15, 18] Worst Ri for COS2 = 16	55368	306 (only 5 datagram alloc. supported)
Rs = 4 dB range for COS1 = [12, 14] Worst Ri for COS2 = 6	59664	523
Rs = 2 dB range for COS1 = [9, 11] Worst Ri for COS2 = 3	61812	1583
Rs = 1 dB range for COS1 = [0, 8] Worst Ri for COS2 = 1.5	125772	7894
Clear sky conditions 8 Mbit/s, uncoded	126254	11962

Tab. 3 - Real data of each out of 10 datagram allocations

The ST-TAB1 and ST-TAB2 in Appendix (for COS2 and COS3 respectively) show the number of bits devoted to the <u>stream sub-frame</u> according to the bit occupancy of the RB+CSF for each Ri value which can be assumed by the COS 1. All the computations are done on the basis of these two tables.

The stream sub-frame normally occupies half of the remaining space in the frame and it is increased by 50% when the RB bit rate is <u>reduced</u> from the standard 8 Mbit/s.

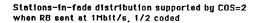
For the various Ri values of the two classes of services COS 2 and COS 3, envisaged for standard voice and video applications (stream traffic), the bit occupancy of a 64Kbit/s throughput is shown at the various bit rates of the preambles+CSBs.

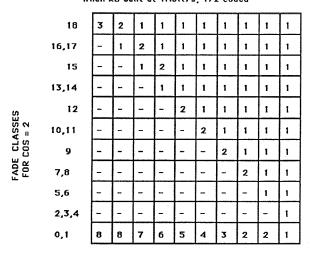
The most expensive case is when the RB must be sent at 1 Mbit/s and 1/2 coded because it means that there is at least one station experiencing a <u>fade level of 18 dB</u> in the network. In this situation, the SRB (RB+CSF) has the maximum expansion due to the imposed Ri factor (reducing, therefore, the available space for the stream and the datagram sub-frames). The preambles and the control sub-bursts of all the bursts must be sent at 1 Mbit/s bit rate.

Tabs. 4 and 5 show a possible utilization of the stream sub-frame in this situation, respectively for COS2 and for COS 3. They are derived utilizing TAB1.COS2 and TAB1.COS3 (in Appendix), respectively for data sent in class of service 2 and 3. It must be reminded, for a correct utilization of the tables in Appendix, that the space available for the stream sub-frame is that one corresponding to the deepest considered fade.

In the tables presented in this report, each column gives one of the possible distributions of stations in fade out of a constant number of active stations. For example, in Tab. 4 the leftmost column indicates that 3 out of 11 active stations can experience a fade level of 18 dB on 8 in no fade conditions. In each column, any number of stations can be moved downward, giving one more possible combination. The fade levels are always expressed in dB and the fade classes group those fade levels which do not provoke any change of the Ri value.

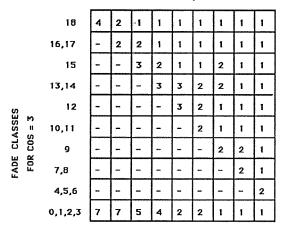
The table does not give an exhaustive scenario of all the possible combinations, but it gives a precise idea of the system performances.





Tab. 4 - 11 active stations

Stations-in-fade distribution supported by COS=3 when RB sent at 1Mbit/s, 1/2 coded



Tab. 5 - 11 active stations

It must be considered that, very likely, not all the stations will experience the same fade level at the same time, but as many as possible stations will continue to send uncoded data at 8Mbit/s. The preambles, in any case, must be sent at the same bit rate used by the master for the reference burst. From the worst case of Tab. 4 (at least one station in each fade class for COS2) it results that when a fade level of 18 dB must be compensated, only 11 stream applications are supportable. This is still valid for COS=3, even if in this case the stream sub-frame is not entirely exhausted.

Let us now make the same computations in a better case: i.e. when all the preambles and CSBs are sent at 2Mbit/s and the reference burst is sent at 2Mbit/s, 1/2 coded. It means that there is at least one station experiencing a <u>fade level of 14 dB</u>. In this case, a number of 32 active stations can be considered.

Stations in fade distribution supported by COS = 2 when RB sent at 2 Mbit/s, 1/2 coded

							<b>.</b>		
COS = 2		13,14	4	3	2	2	2	2	2
	12	-	2	2	2	2	2	2	
	10,11	-		2	1	1	1	1	
	503	9	-	-	-	3	2	1	1
FADE	FOR	7,8	_	-	-	-	2	2	2
Œ	ш	5,6	-	-	-	-	-	2	2
		2,3,4		-	-	-	-	-	2
		0,1	28	27	26	24	23	22	20

Tab. 6 - 32 active stations

Stations-in-fade distribution supported by COS=3 when RB sent at 2Mbit/s, 1/2 coded

	13,14	4	3	3	2	2	2
ISSES = 3	12	-	4	2	3	3	3
	10,11	-	2	2	2	2	2
	9	-	-	-	2	3	3
FADE CLASSES FOR COS = 3	7,8	-	-	-	-	4	3
FAD	4,5,6	-	-	-	-	-	3
	0,1,2,3	28	25	25	23	18	16

Tab. 7 - 32 active stations

Let us now analyze the stream sub-frame situation when the RB is sent at 4 Mbit/s, 1/2 coded: i.e. there is at least one station experiencing a <u>fade level of 11 dB</u>. 45 active stations are considered.

Station-in-fade distribution for COS=2 when RB sent at 4Mbit/s, 1/2 coded

	10,11	9	6	5	5	5
FADE CLASSES FOR COS = 2	9		7	6	4	4
	7,8			6	4	4
	5,6				8	7
	2,3,4					5
	0,1	36	32	28	24	20

Tab. 8 - 45 active stations

Stations-in-fade distribution supported by COS=3 when RB sent at 4Mbit/s, 1/2 coded

	10,11	11	9	8	8
FADE CLASSES FOR COS = 3	9		7	6	5
	7,8			7	6
	4,5,6				7
•	0,1,2,3	34	29	24	19

Tab. 9 - 45 active stations

In the end, Tabs. 10 and 11 show the stream sub-frame utilization when the RB is sent at 8Mbit/s, 1/2 coded: i.e. there is at least one station experiencing a <u>fade level of 8 dB</u>. In this case the stream sub-frame is not enlarged but exactly equal to half of the remaining space in the frame after the RB plus the control sub-frame. Still, 45 active stations can be supported.

Station-in-fade distribution for COS=2 when RB sent at 8Mbit/s, 1/2 coded

7,8 3 2 1

FADE CLASSES 5,6
FOR COS = 2

2,3,4

0,1 42 41 39

Tab. 10 - 45 active stations

Stations-in-fade distribution supported by COS=3 when RB sent at 8Mbit/s, 1/2 coded

Tab. 11 - 45 active stations

### 8.1 Conclusions about the first hypothesis

The behaviour of a system configured with 45 incompressible stream applications and 10 datagram applications, when the datagram sub-frame is assumed to be 1/2 squeezed from a fade of 9 dB on, is summarized in Tab. 12.

	Supportable stream applications (64Kbit/s)	Supportable datagram applications
dB range [15, 18]	11	5
dB range [12, 14]	32	10
dB range [9, 11]	45	10
dB range [0, 8]	45	10

Tab. 12 - Summary

In the second hypothesis we will consider the case in which stream applications may be compressed to 16 Kbit/s and the system is tailored in two ways:

- 1) to support up to 11 dB of fade level. In this case the bit rate (for COS1) may drop down to only 4 Mbit/s and the system can foresee 64 simultaneously active stations;
- 2) to support up to 18 dB of fade level. In this case the bit rate may drop down to 1 Mbit/s and the system must be configured for a reduced number of stations which are guaranteed to be supported even at the lowest value of the Eb/N<sub>0</sub> ratio.

## 9. SECOND HYPOTHESIS: A different tailored system. Compressible stream applications. Stream sub-frame 1/4 enlarged from 6 dB of fade on.

### 9.1 Up to 11dB of fade. In play bit rates: 8 and 4Mbit/s.

Assumptions: 64 simultaneously active stations are assumed, each having one stream allocation and one datagram allocation. Moreover, the number of stream applications supported by the system must remain unchanged from 0 dB fade level to 11 dB fade level.

Room for 64 stream and for 64 datagram allocations is allocated in the RB and SRB. RB-TABLE 5 in Appendix gives the RB and SRB occupancy (in bits, frame percentage and milliseconds) up to when a fade level of 11 dB must be compensated. Fig. 12 shows the relationship between the SRB bit occupancy and the available space (in bits) for the SRB obtained as sum of the RB plus the control sub-frame.

### 

From Fig. 12 it results that the space for the SRB is contained in the CSF plus the RB space up to a fade level of 5 dB. For deeper fades, part of the stream sub-frame must also be used to contain the SRB.

A fade condition of 5 dB seems therefore a good threshold to decide to eventually 1/4 enlarge the stream sub-frame by squeezing the datagram sub-frame, to maintain the already set-up sessions.

Tabs. 13 and 14, based on the computations presented in the tables TABLE1.COS2 and TABLE1.COS3, respectively for data in COS2 and in COS3, show the distribution of the stations in fade supported by the system when the RB is sent at 8Mbit/s, 1/2 coded. The deepest fade level to be countered in this case is 8 dB.

Station-in-fade distribution for COS=2 when RB sent at 8Mbit/s. 1/2 coded

es es	7,8	10	6	4
e classes COS=2	5,6		7	7
Fade c for CO	2,3,4			7
	0,1	54	51	46

Tab. 13 - 64 active stations

Stations-in-fade distribution supported by COS=3 when RB sent at 8Mbit/s, 1/2 coded

CLASSES 0S = 3	7,8	16	12
ں س	4,5,6		9
FAD FOR	0,1,2,3	48	43

Tab. 14 - 64 active stations

64 stream allocations, each declaring a 64Kbit/s throughput, are not supported when the bit rate drops to 4 Mbit/s. Some applications must be compressible to 16Kbit/s; the problem is to find the correct number of compressible stream applications in order to run the system with the same number of global allocations. Tabs. 15 and 16 are derived using both TABLE1.COS2 (data throughput at 64Kbit/s) and TABLE1.C.COS2 (data throughput at 16Kbit/s) for data in class of service 2 and from TABLE1.COS3 and TABLE1.C.COS3 for data in class of service 3. They must be read as Tab. 4 and, apart from that, each column is subdivided into two columns: one for non compressed applications (64 Kbps) and one for the compressed ones (16 Kbps). The number of supported stream applications, for each fade class, is obtained as sum of the values in each row of each column (which, at its turn, consists of two sub-columns).

Station-in-fade distribution for COS=2 when RB sent at 4Mbit/s, 1/2 coded

		64Kbps	lóKbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps
	10,11	-	20	-	10	-	8	-	8	-	8
	9	-	-	3	5	3	5	3	5	3	8
Fade classes for COS=2	7,8	1	1	1	1	3	7	2	7	2	8
	5,6	-	1	1	1	<u>-</u>	-	4	8	4	8
	2,3,4	-	1	ł	1	ı	-	ı	1	4	7
E 2	0,1	30	14	29	27	24	14	19	8	11	1

Tab. 15 - 64 active stations

Station-in-fade distribution for COS=3 when RB sent at 4Mbit/s, 1/2 coded

		64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps
	10,11	1	58	1	29	1	29	-	24
Fade classes for COS= 3	9	1	1	9	19	4	13	2	8
	7,8	1	+	ı	-	5	4	5	4
	4,5,6	ı	1	-	-	-	1	4	5
Ξ Ç	0,1,2,3	6	-	7	-	9	-	12	-

Tab. 16 - 64 active stations

Both in case of COS 2 and in case of COS 3, 11 dB of fade level can be supported by the system running with 64 active stations if some of the foreseen 64 stream applications are compressible to 16Kbit/s. Tabs. 15 and 16 give supportable stream distributions.

### 9.2 About the datagram allocations

Tab. 17 gives a scenario of the maximum number of net bits of real data which can be sent in each allocation in the datagram sub-frame. The stream sub-frame upper limit is considered moved ahead (1/2 squeezing the datagram sub-frame) from a fade of 6 dB on.

In the RB, room for 64 datagram allocations is considered but, as it results from the scenario, this number of applications will not be supported with a fade of 11 dB.

	Bits for the DSF	64 alloc.	32 alloc.	16 alloc.	10 alloc.
Rs = 2 dB range for COS1 = [9, 11] Worst Ri for COS2 = 3	59520	Time State	142	762	1506
Rs = 1 dB range for COS1 = [ 6, 8 ] Worst Ri for COS2 = 1.5	61760	152	796	2082	3626
Rs = 1 dB range for COS1 = [0, 5] Worst Ri for COS2 = 1.33	124941	923	2404	5336	9063
Clear sky conditions 8 Mbit/s, uncoded	125390	1295	3254	7172	11875

Tab. 17

### 9.3 Conclusions about the system tailored up to 11 dB of fade

64 stream allocations, each declaring a 64Kbit/s throughput, are supported in the first 8 dB of fade. From 9 to 11 dB of fade (when the driving bit rate drops from 8 to 4 Mbit/s) this number remains unchanged if about half of the foreseen 64 applications are compressible to 16Kbit/s. As far as the datagram allocations are concerned, it is useless to consider 64 allocations per frame, because, even when supported, the transmit windows are too small compared to the paid overhead.

### 9.4 Up to 18 dB of fade. In play bit rates: 8, 4, 2 and 1Mbits/s.

Assumptions: 32 simultaneously running stations, each having one stream allocation and only 10 stations having datagram traffic. Moreover, the number of stream applications supported by the system must remain unchanged from 0 up to 18 dB of fade level. The stream sub-frame is 1/4 enlarged starting from 9 dB of fade on.

The choice of 10 datagram allocations is derived by the consideration that, as it results from Tab. 17, 10 datagram allocations still allow the transmission of a considerable number of bits at 11 dB of fade, and the fade we are going to consider is still deeper.

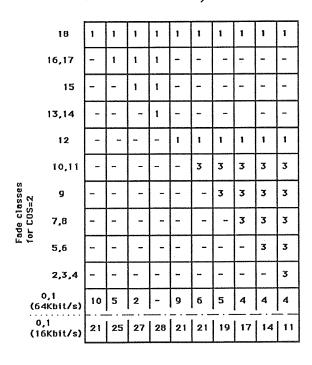
The RB and SRB occupancies are shown in RB-TABLE4 in the Appendix and it is easy to detect that the SRB bit occupancy never exceeds the control sub-frame bit length.

Computations are based on the tables TABL2.COS2 and TABLE2.C.COS2 for the COS=2 traffic requesting respectively a throughput equal to 64 and 16Kbit/s, and on the analogous tables TABLE2.COS3 and TABLE2.C.COS3 for the COS=3 traffic.

Of course, it is obvious that 32 stream and 10 datagram allocations can be easily accommodated when the bit rate is 8 or 4 Mbit/s (see the first hypothesis, in which 45 stream allocations are supported up to a fade of 11 dB together with 10 datagram allocations). In the worst case, i.e. when at least one station is experiencing a fade of 18dB, the station-in-fade stream distribution is given by Tab. 18 for traffic of COS=2.

In this table, the value in each cell represents the number of compressed stream applications (16kbps) supported in that fade class on the basis of the story in the preceding cells of the same column. The last row, corresponding to the lightest fade class, is split into two sub-rows: the highest indicating the number of supported non compressed stream applications, the lowest the number of the compressed ones. The total number of supported applications is obtained, as usually, by adding the values of the same column.

### Station-in-fade distribution for COS = 2 when RB sent at 1Mbit/s, 1/2 coded

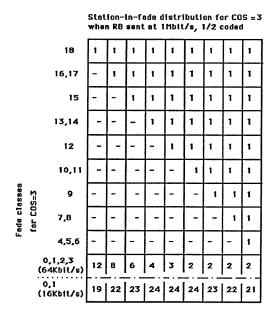


Tab. 18 - 32 active stations

From Tab. 18 it results that a fade of 12 dB cannot be supported by the system together with deeper fades as from 18 to 13 dB, also together with lighter fades as from 0 to 4 dB.

In fact, the fourth column from the left-hand size has zero values from the row corresponding to 12 dB of fade up to the row corresponding to 2 dB of fade. From the next column on, it results that no station in the range of fade from 17 up to 13 dB can be supported together with fades from 12 dB on, when a fade of 18 dB is experienced.

Let us see now the distribution for the stream traffic of COS = 3.



Tab. 19 - 32 active stations

When the requested class of service is 3, at least one station at each fade level can be supported, maintaining the total number of 32 supported stations.

As far as the datagram is concerned, Tab. 20 gives the maximum number of "real data" which can be transmitted (in class of service 2) in each of the 10 datagram allocations. The worst cases of the COS2 at each change of the bit rate have been considered.

	Bits for the DSF	Max number of bits of real "date" for each datagrem ellocation
Rs = 8 dB range for COS1 = [15, 18] Worst R1 for COS2 = 16	57088	327 (only 5 detagrem alloc. supported)
Rs = 4 d8 range for COS1 = [12, 14] Worst Ri for COS2 = 6	60544	545
Rs = 2 dB range for COS1 = [ 9, 11] Worst Ri for COS2 = 3	62272	1598
Rs = 1 d8 range for COS1 = [0, 6] Worst Ri for COS2 = 1.5	126272	7927
Clear sky conditions 8 Mbit/s, enceded	126254	11962

Tab. 20

### 10. CONCLUSIONS ABOUT THE SSF UTILIZATION

Enlarging the stream sub-frame of 1/4 of the frame allows the additional allocation of about 20 64-Kbit/s stream allocations at fade level 0 or 1.

Considering 1 dB the granularity of the increment of the fade level (for example, 8.4 dB are assumed as 9 dB), the driving bit rate is obliged to a 1/2 decrease when the fade level passes from 8 to 9 dB (from 8 Mbit/s to 4 Mbit/s), from 11 to 12 dB (from 4 Mbit to 2 Mbit/s) and from 14 to 15 dB (from 2 Mbit/s to 1 Mbit/s). Therefore, as far as the driving bit rate is concerned, the considered fade level ranges are:

0 - 8 dB	driving bit rate = 8 Mbit/s
9 - 11 dB	driving bit rate = 4 Mbit/s
12 - 14 dB	driving bit rate = 2 Mbit/s
15 - 18 dB	driving bit rate = 1 Mbit/s.

For each fade level range, the worst case has always been considered in the study: i.e., when there is at least one station declaring a fade level of 8 or 11 or 14 or 18 dB. The reference burst has been always assumed transmitted with the worst Ri of each fade level range. Also in realty, it it suggestible to always send the reference burst with the worst Ri of the related fade level range. For example, if station A declares a fade level of 4 dB and station B a fade level of 10 dB, it is suggested to send the reference burst at 4Mbit/s, 1/2 coded, which corresponds to a fade level of 11 dB. This will avoid the reference burst to change its Ri value at each fade declaration.

As far as generic traffic bursts are concerned, general distributions of the stations in the dB ranges, have been studied.

If the enlarging of the stream sub-frame (of 1/4 of the frame) happens from the fade level of 6 dB (section 9.1) instead of from the fade level of 9 dB (section 8 and section 9.4), when at least one station declares a fade level of 8 dB (range from 0 up to 8 dB of fade), up to 64 64-Kbit/s stream allocations are supported (Tabs 13 and 14) in the first case and only 45 64-Kbit/s stream allocations are supported (Tabs 8 and 9) in the second case.

From 9 dB of fade level on, the stream sub-frame is in any case 1/4 enlarged.

In the range from 9 up to 11 dB of fade, Tabs 8 and 9 demonstrate that only 45 64-Kbit/s stream applications are supportable. Therefore, if 64 stream applications must be supported, about 64% of them must be compressed to 16Kbit/s, as shown in Tabs. 15 and 16. The space devoted to the SSF is more or less the same whatever the SRB length is. Therefore, it is obvious that if 45 64-Kbit/s stream allocations fit more or less exactly the stream sub-frame, space for additional 19 allocations must be found only by compressing part of the 64-Kbit/s allocations.

This percentage and all the following ones are computed considering the most right-hand column of the tables, in which the heaviest case is considered, with one or more stations in each class of fade.

In the range from 12 up to 14 dB of fade, 32 64-Kbit/s stream allocations can be accommodated, as shown in Tabs. 6 and 7. A consideration comes from this: if 45 incompressed applications can be supported up to 11 dB of fade, can this number still be supported up to 14 dB of fade if the compressible applications are also considered? The reply is yes, as it results from Tab. 21 (it must be read as Tab. 15) derived, for data sent in class of service 2, from the RB-TABLE3, ST-TABLE1 and ST-C-TABLE1 in the Appendix. Therefore, in the range from 12 up to 14 dB of fade, 32 incompressed stream applications can be supported or 45 stream applications if about 76% of them are compressible to 16 Kbit/s.

### Station-in-fade distribution for COS=2 when RB sent at 2Mbit/s, 1/2 coded

	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps	64Kbps	16Kbps
13,14	2	2	1	2	1	2	1	2	1	2	1	2	1	2
12	-	-	2	3	1	2	1	2	1	2	1	2	1	2
10,11	-	-	-	_	2	2	1	2	1	2	1	2	1	2
9	-	1	-	_	_	_	2	2	2	2	1	2	1	2
7,8	-	-	-	-	-	ı	_	-	2	2	2	2	2	2
5,6	-	-	-		-	-	-	-	-	-	2	2	2	2
2,3,4	-	-	-	-	-	· <b>-</b>	-	-	-	_	-	-	2	2
0,1	19	22	13	24	10	25	8	24	4	24	3	22	1	20

Tab. 21 - 45 stations

In the range <u>from 15 up to 18 dB of fade</u>, only 11 64-Kbit/s stream allocations can be accommodated, as shown in Tabs. 4 and 5. But, 32 stream allocations are supported, as shown in Tabs. 18 and 19 if about 88% of them are compressible.

Fig. 13 is a general scenario of the supported number of stream allocations in all the fade ranges.

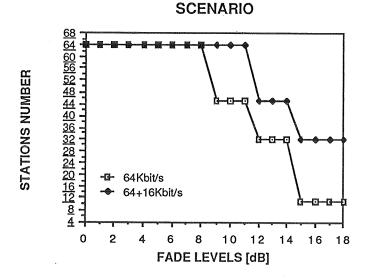


Fig. 13

### 11. CONSIDERATIONS ABOUT THE DSF

The results of the simulation study of the FODA system at 2Mbit/s fixed rate, have shown that 2048 bits, after eventual coding, are the minimum threshold for transmitting data with a good channel efficiency. To this number, the transmission overhead must be added.

When 18 dB of fade must be countered, it results that the condition: Ri x = 2048

must be satisfied, where Ri is the redundancy factor of the data and x the net number of bits. For data sent in class of service 2, Ri varies from 1 (data sent to a station not in fade) up to 16 (data sent to a station experiencing a fade of 18dB). Therefore, the net number of bits ranges from 2048 up to 128. As the overhead is always sent with Rs=8, and considering the satellite header sent at Ri=16 (COS=1 or 2) and to Ri=1, it results that, at 18 dB of fade, the minimum datagram allocations ranges from 8192 bits, considering:

preamble + (csb 1/2 coded) \*Rs => 480\*8=3840 satellite header at Ri = 16 => 144\*16=2304 2048 bits of data (after eventual coding)

to 6032 bits, considering:

preamble + (csb 1/2 coded) \*Rs => 480\*8=3840 satellite header at Ri = 1 => 144 2048 bits of data (after eventual coding).

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A PPENDIX



	A	II в I	l c	ll D	l E	F	ll G	11
1		L. Description of the Contract	RB	CSF	RB+CSF	SRB	Free space	<b>!</b>
2	0	1	832	2660	3492	1952	252508	<b>†</b>
3	1	1.14	887	2743	3630	2167	252370	<b></b>
4	2	1.14	887	2743	3630	2167	252370	<b></b>
5	3	1.14	887	2743	3630	2167	252370	<del></del>
6	4	1.33	960	2854	3814	2454	252186	<b>†</b>
7	5	1.33	960	2854	3814	2454	252186	<b>}</b>
8	6	1.5	1024	2950	3974	2704	253296	<b>}</b>
9	7	1.5	1024	2950	3974	2704	253296	<b></b>
10	8	2	1216	3240	4456	3456	252544	<b> </b>
11	9	3	2048	5740	7788	5408	250592	<b></b>
12	10	3	2048	5740	7788	5408	250592	<b> </b>
13	11	4	2432	6320	8752	6912	249088	ļ
14	12	6	4096	11320	15416	10816	245184	<b> </b>
15	13	6	4096	11320	15416	10816	245184	<b></b>
	14	8	4864	12480	17344			<b> </b>
16	15	12	8192	<u> </u>		13824	242176	<b></b>
17	16	12		22480	30672	21632	234368	ļ
18	********		8192	22480	30672	21632	234368	<b>[</b>
19	17	16	9728	24800	34528	27648	228352	<b>.</b>
20	18	16	9728	24800	34528	27648	228352	ļ
21								<u> </u>
_ 22						<b></b>		<b></b>
23	The bit ra	te used for a	III the prean	nbles is drive	n by the bit	rate of the	RB.	<u> </u>
_24	Therefore	, the driving	bit rate is t	hat one of th	e COS = 1.			
_25	The consi	dered through	ghput for th	e stream reg	uests is 16K	bit/s.		<u> </u>
26	KB compu	ited for 32 s	tream+10 d	atagram allo	cations			
27	guard time							8
	shdr	144						
	csb	128			1			
	tr.put	2048					·	
31	preamble	352						9
_32								•
_ 33	Fade level	Ri (COS=3)	pr. at 2Mbps	pr. at 1Mbps	Stream SBF	Datag. SBF		•
34	0	1	4152	6072	126254	126254		1
35	1	1	4152	6072	126185	126185		<b></b>
36	<u>2</u> 3	1	4152	6072	126185	126185		<del> </del>
37	3	1	4152	6072	126185	126185		<b> </b>
38	4	1.14	4459	6379	126093	126093		<del> </del>
39	5	1.14	4459	6379	126093	126093		<b></b>
40	6	1.14	4459	6379	126648	126648	<b></b>	<del> </del>
41	7	1.33	4875	6795	126648	126648	<b></b>	<b></b>
42	8	1.33	4875	6795	126272	126272	<b></b>	<del> </del>
43	9	1.5	5248	7168	187944	62648	<b></b>	<b>ֈ</b>
44	10	2.66	7791	9711	187944	62648	<b></b>	<b></b>
45	11	2.66	7791	9711	186816	62272	<b>}</b>	<b></b>
46	12	2.00	8536	10456				<b> </b>
47	13	5.33	13643		183888	61296	<b></b>	<b></b>
CONTRACTOR	14	5.33	13643	15563	183888	61296		<b>ļ</b>
48	15	•	13043	15563	181632	60544	<b></b>	<b>ļ</b>
49	15 16	10.66	······	17032	175776	58592	<b></b>	<b>ļ</b>
_50		10.66		27247	175776	58592	<b></b>	<b>.</b>
51	17	10.66		27247	171264	57088		L
52	18	12	***********	30184	171264	57088		
_53								
_54	(*) These	colums show	the bit occu	pancy of a 16	Kbit/s strear	n allocatior	for the variou	S
_55	Ri of the C	COS=3 when	all the prear	nbles must be	sent at bit r	ate 2 and 1	respectively.	
56			TABLE 2.0	COS3				T
57			-				<b>*************************************</b>	

a selection with the contract of the selection of the sel

	l a l	В	l c	l n	l E	l F I
1	EB/N0			CODINGS	<u> </u>	<u> </u>
2		1	7/8	3/4	2/3	1/2
3	12	10**-8	<	<	<	<
4	11	2.5*10**-7	<	<	<	<
5	10	4*10**-6	<	<	<	<
6	9	3.5*10**-5	<	<	<	<
7	8	2*10**-4	3*10**-8		<	
8	7	7.5*10**-4	10**-6	<	<	<
9	6	2.5*1()**-3	3.5*10**-5	4*10**-8	<u> </u>	<
10	5	6*10**-3	6.5*10**-4	1.5*10**-6	<u> </u>	<
_11	4	1.5*10**-2	8*10**-3	3*10**-5	2*10**-7	1.5*10**-8
12	3 2	2.5*10**-2		7*10**-4	6*10**-6	1.5*10**-8
13	<u></u>	4*10**-2		10**-2	10**-4	8*10**-7
14	0	6*10**-2 8*10**-2			2*10**-3	10**-4 4*10**-4
15	U	8*10**-2				4*10**-4
16					<b>}</b>	<b>{</b>
<u>17</u> 18			Eb/N0-TABLE			
10	Relationshi	n hetween the	Eb/No values an	d the hit retec	<b></b>	
20	KCIAHOHSHI	p between the	Eb/No values all	u the bit rates.	<b></b>	<b></b>
21	•••••••••••••••••••••••••••••••••••••••					
22		·······	······			<b></b>
23	***************************************					
24		······································		••••••		
25		***************************************				
26		***************************************				
27	***************************************					
28		***************************************		•••••••••••••••••••••••••••••••••••••••	······	
29		***************************************			***************************************	***************************************
30		***************************************	***************************************	***************************************	······	***************************************
31						
32						
_ 33						
34						
35				······		
36						
37		·····	······			
38						
39		······				
40 41						
42		~~~~~		······		
43						<u> </u>
44		······································				<b></b>
45						<b></b>
46		***************************************	***************************************	***************************************		
47		***************************************				<b>\$</b>
48		······································			·····	······································
49			***************************************		<b>*************************************</b>	<u> </u>
50		***************************************	***************************************	······································	<u> </u>	<b>*******</b>
51						<u> </u>
52		***************************************				<b>E</b>
53						
54	•••••	***************************************				
_ 55		·······				
_ 56						
57		·····			}	
- ^ 1	}		1	}	}	ŧ

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	A	В	С	D	E	F	G	Н	<u> </u>	J	<b> </b>
	<b></b>	CLASS	OF SERV	ICF	#1	<b></b>	CLASS	OS SERVIC	£ #2	<b></b>	<b></b>
THE COLUMN TWO IS NOT THE OWNER.	Fade level		Coding rate		Rc	Ri		Codingrate	Rs	Rc	Ri
4	1×	8	1	<del> ```</del>	1		18 18 18 18 18 18 18 18 18 18 18 18 18 1	1	<del>11</del>	<del> </del>	11
<u>7</u>	••••••••••	8	7/8	ł <del>i</del>	8/7		8	} <u>1</u>	}†	<del>}</del>	4±
#CONCENSOR	†~~~~~~~	8	7/8	11			8	7/8	}	8/7	8/7
6		******		1		2			<u> </u>		
7		8	7/8	<u> </u>	8/7		8	7/8	<u> </u>	8/7	8/7
8		8	3/4	<u> </u>	4/3		8	7/8	<u> </u>	8/7	8/7
	5	8	3/4	<u> </u>	4/3		8	3/4	1	4/3	4/3
10	6	8	2/3	1	3/2	3/2	8	3/4	[]	4/3	4/3
11	7		2/3	1	3/2	3/2	8	2/3	[1	3/2	3/2
12	8	8	1/2	1	2	2	[8	2/3	{1	3/2	3/2
13		4	2/3	2	3/2	3	8	1/2	1	2	2
14	10	4	2/3	2	3/2	3	[4	2/3	2	13/2	13
15		4	1/2	2	**********	4	4	2/3	2	3/2	13
	12		2/3	4	·····	6	4	1/2	2	2	4
17	13	2	2/3	4	Junious manage	6	2	2/3	<del>[</del>	3/2	6
	14	$\overline{2}$	1/2	4	2	8	$\frac{1}{2}$	2/3	<del> </del>	3/2	6
	15		2/3	8	3/2	12	ś	1/2	4	şumm	8
	16	<del>1</del>	2/3 2/3	8	3/2	$\frac{12}{12}$	1		8	2 3/2	12
		1	*************	******	£2	نسسسسن	{ <u>1</u>		***	S	A
21	10	1	1/2	8	2	16	[1		8	3/2	12
	18	1	1/2	8	2	16	[]	1/2	8	2	16
23							<u></u>		<b></b>	Į	ļ
24							<b></b>		<b>}</b>	<u>[</u>	<u></u>
_25		CLASS	OF SERV	ICE:	#3			OS SERVICI	E #4	<u> </u>	
_ 26	Fade level	Bit rate	Coding rate	Rs	Rc	Ri	Bit rate	Codingrate	Rs	Rc	Ri
_27	0	8	1	1	1	1	8	1	1	1	1
_28	1	8	1	1	1	1	8	1	1	1	1
29	2	8	1	1	1	1	8	1	1	1	1
30	3	8	1	1	1	1	8	1	1	1	1
31	4		7/8	1	8/7	8/7	8	1	1	<u> </u>	1
32	5	8	7/8	1		8/7	8	Î	Ī	<u> </u>	<del> </del>
33			7/8	1			8	7/8	} 1	8/7	8/7
34	7	8	3/4	1	4/3	4/3	8	7/8	1	8/7	8/7
	8	8	3/4	1	****	4/3	8	3/4	₹ 1	~~~~~~	
<u>35</u> 36			2/3	1	4/3 3/2	3/2	8	3/4	<u> </u>	4/3	4/3
							<u> </u>		<u> </u>	4/3	4/3
37	10	/www.www/	3/4	2 2	4/3	8/3 8/3	4	7/8	2 2 2	18/7	16/7
38	11	4	3/4	<u>L</u>	*****	<u> </u>	<u> </u>	3/4	<u> </u>	4/3	8/3
39	12	4	2/3	2	3/2	[3	<u> </u>	3/4 7/8	12	4/3	18/3
40	13	2	3/4	4	4/3	16/3	2	1//8	4	8/7	32/7
41		2	3/4	4	4/3	16/3	<u> 1</u> 2	3/4	4	4/3	16/3
	15	2	2/3	4	3/2	6	2 1	3/4	4	4/3	16/3
43	16	1	3/4	8	4/3	32/3	1	7/8	8	8/7	64/7
44	17	1	3/4	8	4/3	32/3	1	3/4 3/4	18	14/3	32/3 32/3
45	18		2/3	8	3/2	12	<u> </u>	3/4	8	4/3	32/3
46		***************************************		r	<b>*********</b>	<b>}</b>	<b>*************</b>	<u></u>	<b></b>	<b>**********</b>	1
47	***************************************	***************************************	***************************************	<b></b>	<b>*******</b>	<b>}</b>	<b>}</b>	<u> </u>	<b>********</b>	<b>}</b>	·
48			·······	<b> </b>	<b>}</b>	<b>}</b>	<b>}</b>	<b>†</b>	<b>†</b>	<del> </del>	·}
49		***************************************		<b></b>	Ri-TA	RLE	<b>}</b>	<b></b>	<b>}</b>	<del></del>	·}
50			The Ri fac	ctore			· · · · · · · · · · · · · · · · · · ·	<b>{</b>	<b>}</b>	<b></b>	<del> </del>
Editorial Village	<b></b>			LLUI 3			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<b></b>	<b>}</b>	<b></b>	<b></b>
51	<b></b>			<b></b>	<b>}</b>	<b>}</b>	<b></b>	<b></b>	<b>}</b>	ļ	
52				<b></b>	<b></b>	<b></b>	<b></b>	<b></b>	<b></b>	<b></b>	<b></b>
<u>53</u>				<b>ļ</b>	ļ	ļ	<u> </u>	ļ	ļ	<u></u>	ļ
<u>54</u>				<b></b>	<b></b>	<b></b>	<b></b>	<u></u>	<b></b>	<b>.</b>	
55											
entrant the state of the				{	}	{	}		}	·	T
56				ž	3	.i	. <b></b>		<u> </u>	.¥	. <b>S</b>

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	64 STREAM AL	LOCATIONS		
	10 DATAGRAM		<u>VS</u>	
	DD D-¥1	DD D-#3	RB occ. Rc *4	RB occ. Rc*8
RB occ. 1*Rs	RB occ. Rc*1 832	RB occ. Rc*2 1664	£	
RB occ. 8/7*Rs	887	1774		
RB occ. 4/3*Rs				
	960	1920		
RB occ. 3/2*Rs	1024		4096	
RB occ. 2*Rs	1216	2432	4864	9728
	SRB occ. Rc*1	SRB occ. Rc*2	SRB occ. Rc *4	SRB occ. Rc*8
SRB occ. 1*Rs	2976	5952	11904	23808
SRB occ. 8/7*Rs	3337	6674	13349	26697
SRB occ. 4/3*Rs	3819	7637		30549
SRB occ. 3/2*Rs	4240	8480		<b> </b>
SRB occ. 2*Rs	5504	11008		
	RB % Rc*1	RB % Rc*2	RB % Rc *4	RB % Rc*8
RB % 1*Rs	0.33	0.65	1.30	2.60
RB % 8/7*Rs	0.35	0.69	1.39	2.77
RB % 4/3*Rs	0.38	0.75	1.50	
RB % 3/2*Rs	0.40	0.80		<b>C</b>
RB % 2*Rs	0.48	0.95	£	
NB 702 N3	0.70	U.22	1.70	2.00
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			SRB % Rc *4	SRB % Rc*8
SRB % 1*Rs	1.16		4.65	9.30
SRB % 8/7*Rs	1.30	2.61	5.21	10.43
SRB % 4/3*Rs	1.49	2.98	\$~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
SRB % 3/2*Rs	1.66		6.63	
SRB % 2*Rs	2.15	4.30	8.60	17.20
	RB [ms] Rc*1		RB [ms] Rc *4	RB [ms] Rc*8
RB [ms] 1*Rs	0.10	0.20	0.41	0.81
RB [ms] 8/7*Rs	0.11	0.22	0.43	0.87
RB [ms] 4/3*Rs	0.12	0.23	0.47	0.94
RB [ms] 3/2*Rs	0.13	0.25	0.50	1.00
RB [ms] 2*Rs	0.15	0.30		1.19
			SRB [ms] Rc *4	SRB [ms] Rc*8
SRB [ms] 1*Rs	0.36			
SRB [ms] 8/7*Rs	0.41	0.81	1.63	3.26
SRB [ms] 4/3*Rs	0.47	0.93	1.86	
SRB [ms] 3/2*Rs	0.52	1.04	\$	
SRB [ms] 2*Rs	0.67	1.34	<b>X</b>	5.38
		RB-TABLE 1.		
DD hocia kit langth		707		
RB basic bit length SRB basic bit lengt	<u>=</u> h =	384 2528		
	<u> </u>		<b></b>	······································

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İ	A	В	l c	n l	<b>[</b> E
1			48 STREAM A	LLOCATIONS	
2	······································	······		M ALLOCATION	<u> </u>
3			NO DILLIA INCLUIA	}	1D
Townson P	······································	ļ	<b>}</b>	<b></b>	······································
4		DD see Deki	DD cos Doka	DD D-*4	DD D - *0
5	DD 12D				RB occ. Rc*8
	RB occ. 1*Rs	832.00	<u> </u>	\$*************************************	6656.00
7	RB occ. 8/7*Rs	886.86		3547.43	7094.86
8	RB occ. 4/3*Rs	960.00	1920.00	3840.00	7680.00
9	RB occ. 3/2*Rs	1024.00	2048.00	4096.00	8192.00
	RB occ. 2*Rs	1216.00			
11					
12	······································		·	·······	·······
_		CDR oca Do#1	CDD oog Doka	SRB occ. Rc *4	CDD ass Dake
13	CDD ass 1*Da				SRB occ. Rc*8
	SRB occ. 1*Rs	2464.00		9856.00	
	SRB occ. 8/7*Rs	2752.00			
	SRB occ. 4/3*Rs	3136.00			25088.00
	SRB occ. 3/2*Rs	3472.00	6944.00	13888.00	27776.00
18	SRB occ. 2*Rs	4480.00			35840.00
19			***************************************		
20	***************************************	***************************************	······	·······	
21		RB % Rc*1	RB % Rc*2	RB % Rc *4	RB % Rc*8
	RB % 1*Rs	0.33	0.65		
	RB % 8/7*Rs		******************		2.60
		0.35			2.77
	RB % 4/3*Rs	0.38			3.00
	RB % 3/2*Rs	0.40		1.60	3.00 3.20
26	RB % 2*Rs	0.48	0.95	1.90	3.80
27	***************************************	***************************************			
28	······			······	
29	***************************************	SRB % Rc*1	SRB % Rc*2	SRB % Rc *4	SRB % Rc*8
	SRB % 1*Rs	0.96		3.85	OND 70 NC 0
	SRB % 1 RS SRB % 8/7*Rs	0.90	1.93		7.70
		1.08	2.15	4.30	
	SRB % 4/3*Rs	1.23	2.45	4.90	9.80
	SRB % 3/2*Rs	1.36		5.43	
34	SRB % 2*Rs	1.75	3.50	7.00	14.00
35					***************************************
36	***************************************	······	······		······································
37		RR [ms] Rc*1	RR [ms] Rc*2	RB [ms] Rc *4	RB [ms] Rc*8
	RB [ms] 1*Rs	0.10	$\frac{1}{0}$	$\frac{1}{\sqrt{11}}$	
			0.20	0.41	0.81
	RB [ms] 8/7*Rs	0.11	0.22	0.43	0.87
	RB [ms] 4/3*Rs	0.12	0.23	0.47	0.94
41	RB [ms] 3/2*Rs	0.13	0.25	0.50	1.00
42	RB [ms] 2*Rs	0.15	0.30	0.59	1.19
43					
44	***************************************			······································	<b></b>
45	•••••••••••••••••••••••••••••••••••••••	SRR [ms] Rc*1	SRR [mc] Rc*2	SRB [ms] Rc *4	SRR [mc] DA*2
	SRB [ms] 1*Rs	0.30			
	SRB [ms] 8/7*Rs				<u> </u>
		0.34		1.34	2.69
	SRB [ms] 4/3*Rs	0.38		1.53	3.06
	SRB [ms] 3/2*Rs	0.42	<b>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</b>	1.70	3.39
50	SRB [ms] 2*Rs	0.55	1.09	2.19	4.38
51					
52	***************************************	······································	RB-TABLE 2		<b></b>
			ali-arabili 4		
53 54 j	DD books last -th		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
	RB basic length =		384		
oursement .v	SRB basic length =	=	2016		
56					
			}		}
57					



	l a	В	l c	l n	l e l	F
1			45 STREAM	ALLOCATION	VS	
2	***************************************	}~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	10 DATAGRA	M ALLOCAT	IONS	
3	***************************************	······································			10110	
4	***************************************	<u> </u>	······			
5	***************************************	RB occ.Rc*1	RB occ.Rc*2	RB occ. Rc *4	RB occ. Rc*8	
	RB occ. 1*Rs	832	1664			
	RB occ. 8/7*Rs	886.86		3547.43		
	RB occ. 4/3*Rs	960				
	RB occ. 3/2*Rs	1024	<u> </u>	\$ <del></del>		······
		1024	\$			
	RB occ. 2*Rs	1210	2432	4864	9728	
		<b>}</b>		······		
12						
13		SRB occ.Rc*1	SRB occ. Rc*2		SRB occ. Rc*8	
	SRB occ. 1*Rs	2368	4736	9472	18944	
	SRB occ. 8/7*Rs	2642.29		10569.14	21138.29	
	SRB occ. 4/3*Rs	3008	**************	************************************	24064	
	SRB occ. 3/2*Rs	3328	***************************************		26624	
18	SRB occ. 2*Rs	4288	8576	17152	34304	
19	~~~~~		***************************************			
20	***************************************					
21		RB % Rc*1		RB % Rc *4	RB % Rc*8	
TOTAL CONTRACTOR OF THE PARTY O	RB % 1*Rs	0.33	0.65	1.30	2.60 2.77	
23	RB % 8/7*Rs	0.35	0.69	1.39	2.77	***************************************
24	RB % 4/3*Rs	0.38	0.75	1.50	3.00 3.20	
25	RB % 3/2*Rs	0.40		1.60	3.20	***************************************
26	RB % 2*Rs	0.48	0.95	1.90	3.80	
27					2.00	
28			······································	······································		
29		SRB % Rc*1	SRB % Rc*2	SRB % Rc *4	SRB % Rc*8	
	SRB % 1*Rs	0.93	1.85	3.70	7.40	
	OKD 70 L KS	0.75			7.408	
3.1	SRR % 8/7*Rc	1 03	2.06	/ 13	8 26	***************************************
	SRB % 8/7*Rs	1.03	2.06 2.35	4.13	8.26 0.40	
32	SRB % 4/3*Rs	1.18	2.35	4.70	9.40	
32 33	SRB % 4/3*Rs SRB % 3/2*Rs	1.18 1.30	2.35 2.60	4.70 5.20	9.40 10.40	
32 33 34	SRB % 4/3*Rs	1.18	2.35 2.60	4.70	9.40 10.40	
32 33 34 35	SRB % 4/3*Rs SRB % 3/2*Rs	1.18 1.30	2.35 2.60	4.70 5.20	9.40 10.40	
32 33 34 35 36	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs	1.18 1.30 1.68	2.35 2.60 3.35	4.70 5.20 6.70	9,40 10,40 13,40	
32 33 34 35 36 37	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs	1.18 1.30 1.68 RB [ms] Rc*1	2.35 2.60 3.35 RB [ms] Rc*2	4.70 5.20 6.70 RB [ms] Rc *4	9.40 10.40 13.40 RB [ms] Rc*8	
32 33 34 35 36 37 38	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R	1.18 1.30 1.68 RB [ms] Rc*1 0.10	2.35 2.60 3.35 RB [ms] Rc*2 0.20	4.70 5.20 6.70 RB [ms] Rc *4 0.41	9.40 10.40 13.40 RB [ms] Rc*8 0.81	
32 33 34 35 36 37 38 39	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11	2.35 2.60 3.35 RB [ms] Rc*2 0.20 0.22	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87	
32 33 34 35 36 37 38 39 40	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12	2,35 2,60 3,35 RB [ms] Rc*2 0,20 0,22 0,23	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87 0,94	
32 33 34 35 36 37 38 39 40 41	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12 0.13	2.35 2.60 3.35 RB [ms] Rc*2 0.20 0.22 0.23 0.25	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87 0,94 1,00	
32 33 34 35 36 37 38 39 40 41 42	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12	2,35 2,60 3,35 RB [ms] Rc*2 0,20 0,22 0,23	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87 0,94	
32 33 34 35 36 37 38 39 40 41 42 43	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12 0.13	2.35 2.60 3.35 RB [ms] Rc*2 0.20 0.22 0.23 0.25	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87 0,94 1,00	
32 33 34 35 36 37 38 39 40 41 42	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15	2.35 2.60 3.35 RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59	9.40 10.40 13.40 RB [ms] Rc*8 0.81 0.87 0.94 1.00 1.19	
32 33 34 35 36 37 38 39 40 41 42 43 44 45	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs	RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15 SRB [ms] Rc*1	2.35 2.60 3.35 RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30 SRB [ms] Rc*2	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4	9.40 10.40 13.40 RB [ms] Rc*8 0.81 0.87 0.94 1.00 1.19	
32 33 34 35 36 37 38 39 40 41 42 43 44 45	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15 SRB [ms] Rc*1 0.29	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30  SRB [ms] Rc*2 0.58	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87 0,94 1,00 1,19 SRB [ms] Rc*8	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs	RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15 SRB [ms] Rc*1	2.35 2.60 3.35 RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30 SRB [ms] Rc*2	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4	9.40 10.40 13.40 RB [ms] Rc*8 0.81 0.87 0.94 1.00 1.19	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15 SRB [ms] Rc*1 0.29	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30  SRB [ms] Rc*2 0.58	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16	9,40 10,40 13,40 RB [ms] Rc*8 0,81 0,87 0,94 1,00 1,19 SRB [ms] Rc*8	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 8/7*Rs SRB [ms] 4/3*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15 SRB [ms] Rc*1 0.29 0.32	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47	9,40 10,40 13,40 RB [ms] Rc*8 0,87 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 4/3*Rs SRB [ms] 4/3*Rs SRB [ms] 3/2*Rs	1.18 1.30 1.68 RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15 SRB [ms] Rc*1 0.29 0.32 0.37	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9.40 10.40 13.40 13.40 RB [ms] Rc*8 0.87 0.94 1.00 1.19 SRB [ms] Rc*8 2.31 2.58 2.94	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 8/7*Rs SRB [ms] 4/3*Rs	RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 4/3*Rs SRB [ms] 4/3*Rs SRB [ms] 3/2*Rs	RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.22 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81 1.05	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 4/3*Rs SRB [ms] 4/3*Rs SRB [ms] 3/2*Rs	RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 8/7*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.18 1.30 1.68  RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41 0.52	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81 1.05  RB-TABLE 3	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 4/3*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.18 1.30 1.68  RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41 0.52	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81 1.05  RB-TABLE 3	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 8/7*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.18 1.30 1.68  RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41 0.52	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81 1.05  RB-TABLE 3	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 4/3*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.18 1.30 1.68  RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41 0.52	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81 1.05  RB-TABLE 3	4.70 5.20 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47 1.63	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	
32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB occ. [ms] 1*R RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 4/3*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.18 1.30 1.68  RB [ms] Rc*1 0.10 0.11 0.12 0.13 0.15  SRB [ms] Rc*1 0.29 0.32 0.37 0.41 0.52	2.35 2.60 3.35  RB [ms] Rc*2 0.20 0.23 0.25 0.30  SRB [ms] Rc*2 0.58 0.65 0.73 0.81 1.05  RB-TABLE 3	4.70 5.20 6.70 6.70 RB [ms] Rc *4 0.41 0.43 0.47 0.50 0.59 SRB [ms] Rc *4 1.16 1.29 1.47	9,40 10,40 13,40 13,40 RB [ms] Rc*8 0,81 0,94 1,00 1,19 SRB [ms] Rc*8 2,31 2,58 2,94 3,25	



	A	В	С	D	E
1	***************************************			LLOCATIONS	
2	***************************************		10 DATAGRA	M ALLOCATIO	VS
3	·····				
4		RB occ.Rc*1			RB occ. Rc*8
	RB occ. 1*Rs	832.00			
	RB occ. 8/7*Rs	886.86		3547.43	
7	RB occ. 4/3*Rs	960.00			
8	RB occ. 3/2*Rs	1024.00			8192.00
9	RB occ. 2*Rs	1216.00	2432.00	4864.00	9728.00
10	***************************************				
11	······				
12	· <u>·······</u>				SRB occ. Rc*8
13	SRB occ. 1*Rs	1952.00	·····		
	SRB occ. 8/7*Rs	2166.86			
	SRB occ. 4/3*Rs	2453.33			
	SRB occ. 3/2*Rs	2704.00	<u> </u>		
_17	SRB occ. 2*Rs	3456.00	6912.00	13824.00	27648.00
18					
19					
20					RB % Rc*8
	RB % 1*Rs	0.33			
	RB % 8/7*Rs	0.35	0.69	1.39	2.77
	RB % 4/3*Rs	0.38	0.75	1.50	3.00
	RB % 3/2*Rs	0.40	0.80	1.60	3.20
25	RB % 2*Rs	0.48	0.95	1.90	3.80
26					
27					
28		SRB % Rc*1	SRB % Rc*2	SRB % Rc *4	SRB % Rc*8
	SRB % 1*Rs	0.76	1.53	3.05	6.10
	SRB % 8/7*Rs	0.85	1.69	3.39	677
	SRB % 4/3*Rs	0.96	1.92	3.83	7.67
32	SRB % 3/2*Rs	1.06	2.11	4.23	8.45
33	SRB % 2*Rs	1.35	2.70	5.40	
34		***************************************		. ,	
35					
36	······································	RB [ms] Rc*1	RB [ms] Rc*2	RB [ms] Rc *4	RB [ms] Rc*8
37	RB [ms] 1*Rs	0.10	0.20	0.41	
38	RB [ms] 8/7*Rs	0.11	0.22		
	RB [ms] 4/3*Rs	0.12	0.23	0.47	0.94
40	RB [ms] 3/2*Rs	0.13	0.23 0.25	0.50	
_41	RB [ms] 2*Rs	0.15	0.30		1.19
42				***************************************	
43					<b></b>
44		SRB [ms] Rc*1	SRB [ms] Rc*2	SRB [ms] Rc *4	SRB [ms] Rc*8
	SRB [ms] 1*Rs	0.24	0.48	0.95	1.91
	SRB [ms] 8/7*Rs	0.26	0.53	1.06	2.12 2.40
47	SRB [ms] 4/3*Rs	0.30	0.60	1.20	2.40
48	SRB [ms] 3/2*Rs	0.33	0.66		2.64 3.38
49	SRB [ms] 2*Rs	0.42	0.84	1.69	3.38
50					
51					
52			RB-TABLE 4		
53					
	RB basic bit lengtl	1 =	384		
	SRB basic bit leng		1504		
56					
57					
			······································		<del></del>

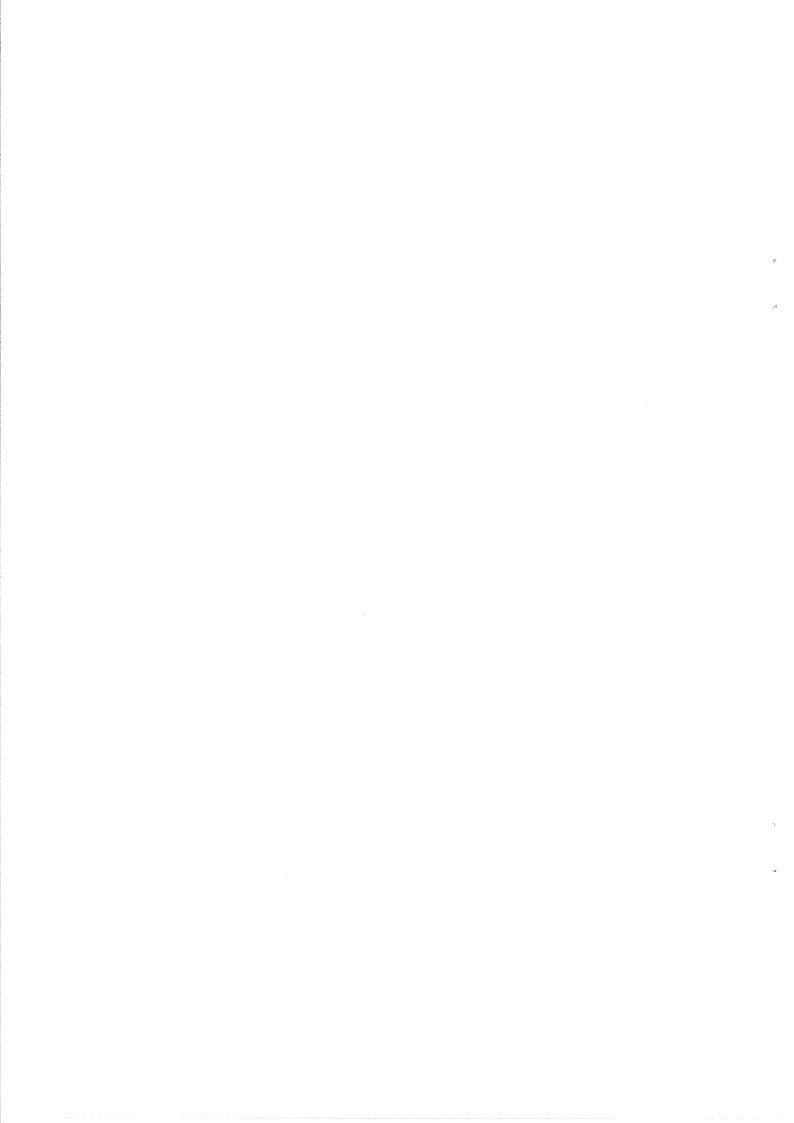


	<b>l</b> A	В	[c	D D	E
1				LLOCATIONS	
2		<b>.</b>	64 DATAGRA	M ALLOCATIO	<u>NS</u>
3					
4		DD cos Do*1	DD 000 D0*2	DD 222 D2 84	DD see Dayo
5	RB occ. 1*Rs	RB occ.Rc*1 2560	5120	RB occ. Rc *4 10240	RB occ. Rc*8
	RB occ. 8/7*Rs	2862	5723	10240	
	RB occ. 4/3*Rs	3264	6528		26112
-	RB occ. 3/2*Rs	3616	7232	13030 14464	28928
	RB occ. 2*Rs	4672	9344	18688	37376
11		1012		, 10000	37370
12	***************************************	1			
13	***************************************	SRB occ.Rc*1	SRB occ. Rc*2	SRB occ. Rc *4	SRB occ. Rc*8
14	SRB occ. 1*Rs	4704	9408	18816	37632
	SRB occ. 8/7*Rs	5312	<b></b>		42496
	SRB occ. 4/3*Rs	6123		24491	48981
	SRB occ. 3/2*Rs	6832		27328	54656
	SRB occ. 2*Rs	8960	17920	35840	71680
19		<b></b>			
20		DD 07. D 2*1	DD 07. Da±3	DD 07. D 2 *4	RB % Rc*8
21	RB % 1*Rs				
	RB % 8/7*Rs	1.00 1.12	2.00 2.24	4.00 4.47	8.00
	RB % 4/3*Rs	1.12	2.24	5.10	8.94 10.20
	RB % 3/2*Rs	1.20	2.33 2.83	5.65	11.30
	RB % 2*Rs	1.83	2.65 3.65	7.30	14.60
27	ND 70 2 113	1.05	2.03	1.50	14.00
28	······	<b></b>		······	
29		SRB % Rc*1	SRB % Rc*2	SRB % Rc *4	SRB % Rc*8
	SRB % 1*Rs	1.84		7.35	14.70
31	SRB % 8/7*Rs	2.08		8.30	16.60
32	SRB % 4/3*Rs	2.39	4.78	9.57	19.13
	SRB % 3/2*Rs	2.67		***************************************	21.35
	SRB % 2*Rs	3.50	7.00	14.00	28.00
35	······				
36					
37				RB [ms] Rc *4	
	RB [ms] 1*Rs	0.31		1.25	2.50
	RB [ms] 8/7*Rs	0.35			2.79
	RB [ms] 4/3*Rs RB [ms] 3/2*Rs	0.40 0.44		1.59 1.77	3.19 3.53
	RB [ms] 2*Rs	0.44		2.28	3.55 4.56
43	No [maj 2 10	0.57	1.14	4.20	4.30
44	······································	······			
45		SRB [ms] Rc*1	SRB [ms] Rc*2	SRB [ms] Rc *4	SRB [ms] Rc*8
	SRB [ms] 1*Rs	0.57	1.15	2.30	4.59
	SRB [ms] 8/7*Rs	0.65	1.30	2.30 2.59	5.19
	SRB [ms] 4/3*Rs	0.65 0.75	1.49	2.99 3.34	5.98
49	SRB [ms] 3/2*Rs	0.83	1.67	3.34	6.67
50	SRB [ms] 2*Rs	1.09	2.19	4.38	8.75
51	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
52					
53	·····		RB - TABLE 5		
54	***************************************			•••••••••••••••••••••••••••••••••••••••	
55	······				
56					
57	······				
		· ·	•	•	•

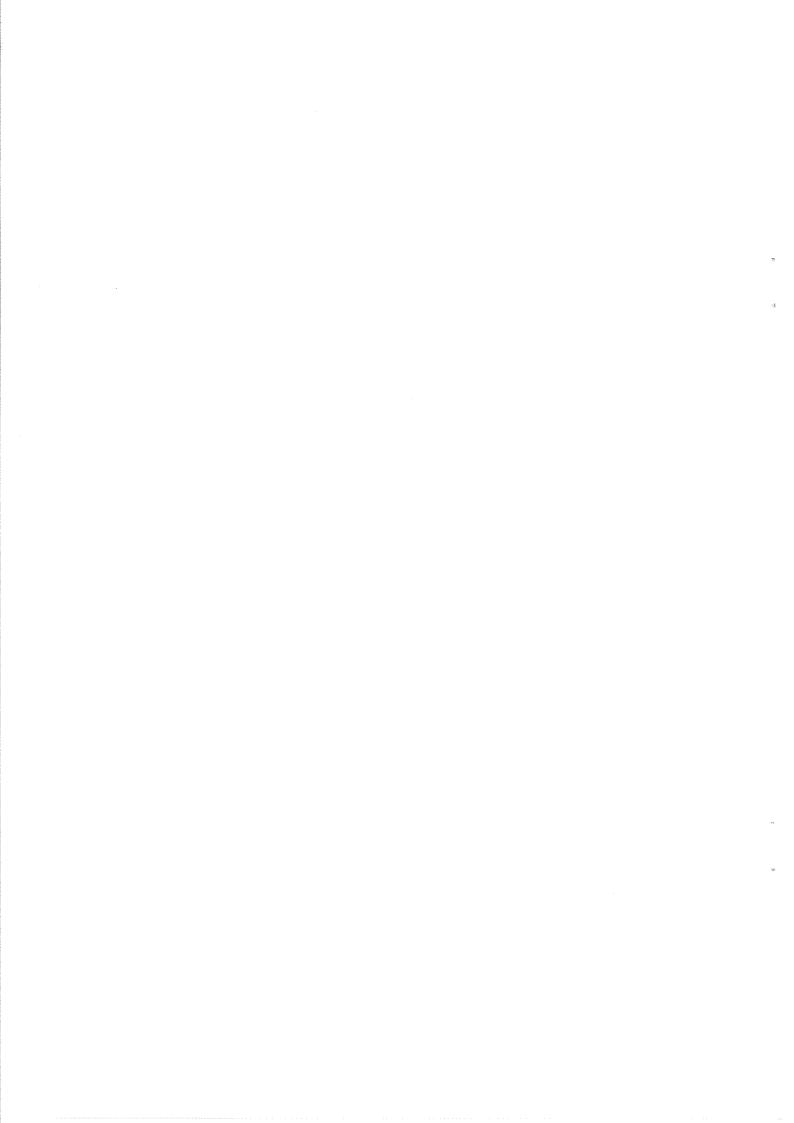
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	<b>l</b> A	<b>l</b> l 8 l	l c l	i n	l E II
1			64 STREAM	ALLOCATION	VS
2		·	32 DATAGRA	AM ALLOCAT	IONS
3		<b>†</b>			
4	······	······································	***************************************	······	
5		RB occ.Rc*1	RB occ.Rc*2	RB occ. Rc *4	RB occ. Rc*8
	RB occ. 1*Rs	1536	3072	6144	
	RB occ. 8/7*Rs	1691	3383	6766	
	RB occ. 4/3*Rs	1899	3797	7595	15189
	RB occ. 3/2*Rs	2080	4160	Saaraanaanaanaanaanaanaanaanaanaanaanaana	
-	RB occ. 2*Rs	2624			
11	KD UCC. 2 KS	2027	52-10	10720	
12					
13		SRR occ Re*1	SRR occ Re*2	SRB occ. Rc *4	SRR occ Rc*8
	SRB occ. 1*Rs	3680			
	SRB occ. 8/7*Rs	4142	7300 8283	16567	33134
-	•	4757	9515	19029	38059
	SRB occ. 4/3*Rs	5296		21184	30039
	SRB occ. 3/2*Rs			21184 27740	42368 55306
	SRB occ. 2*Rs	6912	13824	27648	55296
19		ļ			
20			DD 07 D +2	DD 07 D 24	DD 07 D 240
21		· · · · · · · · · · · · · · · · · · ·			RB % Rc*8
	RB % 1*Rs	0.60		2.40	4.80
	RB % 8/7*Rs	0.66		2.64	5.29
	RB % 4/3*Rs	0.74		2.97	
	RB % 3/2*Rs	0.81	1.63	3.25	6.50
26	RB % 2*Rs	1.03	2.05	4.10	8.20
27					
28					
29		SRB % Rc*1	SRB % Rc*2	SRB % Rc *4	SRB % Rc*8
	SRB % 1*Rs	1.44	2.88	5.75	11.50
	SRB % 8/7*Rs	1.62	3.24		
	SRB % 4/3*Rs	1.86	3.72	7.43	
	SRB % 3/2*Rs	2.07	4.14	8.28	
	SRB % 2*Rs	2.70	5.40		\$
35	D1117 / / 2 113	}		10.00	
36		<b></b>			<b></b>
37		RB [ms] Rc*1	RR [ms] Rc*2	RR [ms] Rc *4	RR [ms] Rc*8
	RB [ms] 1*Rs	0.19			
ACCOUNT MANAGEMENT	RB [ms] 8/7*Rs	0.19 $0.21$	0.38	0.73	1.65
	RB [ms] 4/3*Rs	0.21 $0.23$	0.41	0.83	1.85
CONTRACTOR OF THE PARTY OF THE	************************************	0.23	0.40	1.02	2.03
	RB [ms] 3/2*Rs	0.23	0.51	1.02	2.03
Sent Selection of the least of	RB [ms] 2*Rs	U.32	<b>U.</b> 04	1.28	2.30
43		<b></b>			
44		CDD [] The way	CDD I I D - *	CDD [1 D - * 4	CDD [mail Daws
45	ODD f 3 445				SRB [ms] Rc*8
	SRB [ms] 1*Rs	0.45	0.90		<u>*************************************</u>
AND DESCRIPTION OF THE PERSON NAMED IN	SRB [ms] 8/7*Rs	0.51	1.01	2.02	4.04
Section 1	SRB [ms] 4/3*Rs	0.58	1.16	2.32	4.65
BOOK CHOOL COMPANY	SRB [ms] 3/2*Rs	0.65	1.29	2.59	5.17
discussion of the last of the	SRB [ms] 2*Rs	0.84	1.69	3.38	6.75
51	······				
52					
			RB - TABLE (	<u> </u>	
53					}
<u>53</u>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				}
54					
54 55					
54					



	l a	<b>I</b> I в I	1 1	l n l	[ E
1			64 STREAM AL	LOCATIONS.	***************************************
2	·····	<b></b>		ALLOCATION	S
3		<b></b>			<del></del>
4		<b></b>			
5		RB occ.Rc*1	RB occ.Rc*2	RB occ. Rc *4	RB occ. Rc*8
	RB occ. 1*Rs	1024		4096	
	RB occ. 8/7*Rs	1106	<u> </u>	4425	8850
1000	RB occ. 4/3*Rs	1216	•	4864	9728
	RB occ. 3/2*Rs	1312	2624	5248	10496
	RB occ. 2*Rs	1600		6400	<u> </u>
11					
12					·····
13	***************************************	SRB occ.Rc*1	SRB occ. Rc*2	SRB occ. Rc *4	SRB occ. Rc*8
	SRB occ. 1*Rs	3168		12672	25344
	SRB occ. 8/7*Rs	3557	7113	14226	28453
	SRB occ. 4/3*Rs	4075	\$	16299	32597
	SRB occ. 3/2*Rs	4528	?	18112	36224
	SRB occ. 2*Rs	5888		Z	47104
19			V		
20	······	<b></b>			<u></u>
21		RB % Rc*1	RB % Rc*2	RB % Rc *4	RB % Rc*8
	RB % 1*Rs	0.40			\$~~~~~~~~~ <del>~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>
	RB % 8/7*Rs	0.43	S. a.	\$	3.46
	RB % 4/3*Rs	0.48		1.90	
	RB % 3/2*Rs	0.51	1.03	2.05	4.10
	RB % 2*Rs	0.63		2.50	5.00
27	10 70 2 Kg				
28		<b></b>			·····
		CDD 67 D 41	000	£~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u></u>
		INKK WO KOTI	NRR % RC*2	SRR % Rc *4	ISRR % Rc*X
29	SRR % 1*Rc		SRB % Rc*2	SRB % Rc *4	SRB % Rc*8
30	SRB % 1*Rs SRR % 8/7*Rs	1.24	2.48	4.95	9.90
30 31	SRB % 8/7*Rs	1.24 1.39	2.48 2.78	4.95 5.56	9.90 11.11
30 31 32	SRB % 8/7*Rs SRB % 4/3*Rs	1.24 1.39 1.59	2.48 2.78 3.18	4.95 5.56 6.37	9.90 11.11 12.73
30 31 32 33	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs	1.24 1.39 1.59 1.77	2.48 2.78 3.18 3.54	4.95 5.56 6.37 7.08	9.90 11.11 12.73 14.15
30 31 32 33 34	SRB % 8/7*Rs SRB % 4/3*Rs	1.24 1.39 1.59	2.48 2.78 3.18 3.54	4.95 5.56 6.37	9.90 11.11 12.73 14.15
30 31 32 33 34 35	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs	1.24 1.39 1.59 1.77	2.48 2.78 3.18 3.54	4.95 5.56 6.37 7.08	9.90 11.11 12.73 14.15
30 31 32 33 34 35 36	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs	1.24 1.39 1.59 1.77 2.30	2.48 2.78 3.18 3.54 4.60	4.95 5.56 6.37 7.08 9.20	9.90 11.11 12.73 14.15 18.40
30 31 32 33 34 35 36 37	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1	2.48 2.78 3.18 3.54 4.60 RB [ms] Rc*2	4.95 5.56 6.37 7.08 9.20 RB [ms] Rc *4	9.90 11.11 12.73 14.15 18.40 RB [ms] Rc*8
30 31 32 33 34 35 36 37 38	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13	2.48 2.78 3.18 3.54 4.60 RB [ms] Rc*2 0.25	4.95 5.56 6.37 7.08 9.20 RB [ms] Rc *4 0.50	9.90 11.11 12.73 14.15 18.40 RB [ms] Rc*8
30 31 32 33 34 35 36 37 38 39	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14	2.48 2.78 3.18 3.54 4.60 RB [ms] Rc*2 0.25 0.27	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54	9.90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08
30 31 32 33 34 35 36 37 38 39	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15	2.48 2.78 3.18 3.54 4.60 RB [ms] Rc*2 0.25 0.27	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59	9.90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19
30 31 32 33 34 35 36 37 38 39 40 41	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15 0.16	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64	9,90 11,11 12,73 14,15 18,40  RB [ms] Rc*8 1,00 1,08 1,19 1,28
30 31 32 33 34 35 36 37 38 39 40 41 42	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59	9.90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19
30 31 32 33 34 35 36 37 38 39 40 41 42 43	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15 0.16	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64	9,90 11,11 12,73 14,15 18,40  RB [ms] Rc*8 1,00 1,08 1,19 1,28
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30 <b>RB [ms] Rc*1</b> 0.13 0.14 0.15 0.16	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78	9,90 11,11 12,73 14,15 18,40 18,40  RB [ms] Rc*8 1,00 1,08 1,19 1,28 1,56
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20 SRB [ms] Rc*1	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4	9.90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20 SRB [ms] Rc*1 0.39	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55	9.90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30 RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20 SRB [ms] Rc*1 0.39 0.43	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74	9,90 11,11 12,73 14,15 18,40  RB [ms] Rc*8 1,00 1,08 1,19 1,28 1,56  SRB [ms] Rc*8 3,09 3,47
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/3*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 2*Rs  SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/3*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99	9,90 11,11 12,73 14,15 18,40  RB [ms] Rc*8 1,00 1,08 1,19 1,28 1,56  SRB [ms] Rc*8 3,09 3,47 3,98 4,42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 2*Rs  SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 2*Rs  SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11 1.44	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 45 46 47 48 49 50 51 52 53	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 2*Rs  SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 2*Rs  SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11 1.44	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 2*Rs  SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs SRB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11 1.44	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 56	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11 1.44	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42
30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	SRB % 8/7*Rs SRB % 4/3*Rs SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs RB [ms] 3/2*Rs	1.24 1.39 1.59 1.77 2.30  RB [ms] Rc*1 0.13 0.14 0.15 0.16 0.20  SRB [ms] Rc*1 0.39 0.43 0.50 0.55	2.48 2.78 3.18 3.54 4.60  RB [ms] Rc*2 0.25 0.27 0.30 0.32 0.39  SRB [ms] Rc*2 0.77 0.87 0.99 1.11 1.44	4.95 5.56 6.37 7.08 9.20  RB [ms] Rc *4 0.50 0.54 0.59 0.64 0.78  SRB [ms] Rc *4 1.55 1.74 1.99 2.21	9,90 11.11 12.73 14.15 18.40  RB [ms] Rc*8 1.00 1.08 1.19 1.28 1.56  SRB [ms] Rc*8 3.09 3.47 3.98 4.42



	l A	∥ в	С	l n	E
1			32 STREAM A	LLOCATIONS	
2		<u> </u>		M ALLOCATION	İS
3		}			<del>}</del>
4		}			
5		RB occ.Rc*1	RB occ.Rc*2	RB occ. Rc *4	RB occ. Rc*8
	RB occ. 1*Rs	1536			
	RB occ. 8/7*Rs	1691	3383	6766	&
-	RB occ. 4/3*Rs	1899		7595	
-	RB occ. 3/2*Rs	2080	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
-	\$~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	······	······	8320	<del>}</del>
	RB occ. 2*Rs	2624	5248	10496	20992
	·	<b></b>			
12		CDD oos Do*1	CDD ass Daki	CDD D- \$4	CDD - D.¥0
13	(355) 445				SRB occ. Rc*8
	SRB occ. 1*Rs	2656		8	21248
-	SRB occ. 8/7*Rs	2971	5943	11886	
	SRB occ. 4/3*Rs	3392	*************************************		27136
	SRB occ. 3/2*Rs	3760		15040	
18	SRB occ. 2*Rs	4864	9728	19456	38912
19					
20					
21		RB % Rc*1		RB % Rc *4	RB % Rc*8
22	RB % 1*Rs	0.60	1.20	2.40	4.80
23	RB % 8/7*Rs	0.66		2.64	5.29
24	RB % 4/3*Rs	0.74		2.97	5.93
	RB % 3/2*Rs	0.81	1.63		6.50
	RB % 2*Rs	1.03	2.05		8.20
27			2:02	1.10	0.20
28	······		······		
29	······	SRB % Rc*1	SRB % Rc*2	SRB % Rc *4	SRB % Rc*8
-	SRB % 1*Rs	1.04	2.08		8.30
	SRB % 8/7*Rs	1.16	2.32	4.64	9.29
	SRB % 4/3*Rs	1.33	2.52	5 20	10.60
.1/1				1 11	
***************************************	*********		2.03	5 00	10.60
33	SRB % 3/2*Rs	1.47	2.94	5.88	10.00
33 34	*********		2.94	5.88 7.60	10.60 11.75 15.20
33 34 35	SRB % 3/2*Rs	1.47	2.94	5.88 7.60	10.60 11.75 15.20
33 34 35 36	SRB % 3/2*Rs SRB % 2*Rs	1.47 1.90	2,94 3,80	7.60	15.20
33 34 35 36 37	SRB % 3/2*Rs SRB % 2*Rs	1.47 1.90 RB [ms] Rc*1	2.94 3.80 RB [ms] Rc*2	7.60 RB [ms] Rc *4	15,20 RB [ms] Rc*8
33 34 35 36 37 38	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs	1.47 1.90 RB [ms] Rc*1 0.19	2.94 3.80 RB [ms] Rc*2 0.38	7.60 RB [ms] Rc *4 0.75	15.20 RB [ms] Rc*8
33 34 35 36 37 38 39	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21	2,94 3.80 RB [ms] Rc*2 0.38 0.41	7.60 RB [ms] Rc *4 0.75 0.83	15.20 RB [ms] Rc*8 1.50 1.65
33 34 35 36 37 38 39 40	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23	2,94 3,80 RB [ms] Rc*2 0,38 0,41 0,46	7.60 RB [ms] Rc *4 0.75 0.83 0.93	15.20 RB [ms] Rc*8 1.50 1.65 1.85
33 34 35 36 37 38 39 40 41	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25	2,94 3.80 RB [ms] Rc*2 0.38 0.41 0.46 0.51	7.60 RB [ms] Rc *4 0.75 0.83 0.93	15.20 RB [ms] Re*8 1.50 1.65 1.85 2.03
33 34 35 36 37 38 39 40 41 42	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23	2,94 3,80 RB [ms] Rc*2 0,38 0,41 0,46	7.60 RB [ms] Rc *4 0.75 0.83 0.93 1.02	15.20 RB [ms] Rc*8 1.50 1.65 1.85
33 34 35 36 37 38 39 40 41 42 43	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25	2,94 3.80 RB [ms] Rc*2 0.38 0.41 0.46 0.51	7.60 RB [ms] Rc *4 0.75 0.83 0.93	15.20 RB [ms] Re*8 1.50 1.65 1.85 2.03
33 34 35 36 37 38 39 40 41 42	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25 0.32	2,94 3,80 RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28	15.20 RB [ms] Re*8 1.50 1.65 1.85 2.03
33 34 35 36 37 38 39 40 41 42 43 44 45	RB [ms] 1*Rs RB [ms] 1*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25 0.32 SRB [ms] Rc*1	2.94 3.80 RB [ms] Rc*2 0.38 0.41 0.46 0.51 0.64	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4	15.20  RB [ms] Rc*8  1.50  1.65  1.85  2.03  2.56  SRB [ms] Rc*8
33 34 35 36 37 38 39 40 41 42 43 44 45	SRB % 3/2*Rs SRB % 2*Rs RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25 0.32 SRB [ms] Rc*1 0.32	2.94 3.80 RB [ms] Rc*2 0.38 0.41 0.46 0.51 0.64 SRB [ms] Rc*2 0.65	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8
33 34 35 36 37 38 39 40 41 42 43 44 45 46	RB [ms] 1*Rs RB [ms] 1*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25 0.32 SRB [ms] Rc*1 0.32	2.94 3.80 RB [ms] Rc*2 0.38 0.41 0.46 0.51 0.64 SRB [ms] Rc*2 0.65	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.21 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36	2.94 3.80 RB [ms] Rc*2 0.38 0.41 0.46 0.51 0.64 SRB [ms] Rc*2 0.65	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45	15.20  RB [ms] Re*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Re*8 2.59 2.90 3.31
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs  SRB [ms] 1*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66	15.20  RB [ms] Re*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Re*8 2.59 2.90 3.31
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 2*Rs  SRB [ms] 1*Rs SRB [ms] 1*Rs SRB [ms] 4/3*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92 1,19	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92 1,19	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92 1,19	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92 1,19	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	SRB % 3/2*Rs SRB % 2*Rs  RB [ms] 1*Rs RB [ms] 8/7*Rs RB [ms] 4/3*Rs RB [ms] 3/2*Rs RB [ms] 1*Rs SRB [ms] 3/2*Rs	1.47 1.90 RB [ms] Rc*1 0.19 0.23 0.25 0.32 SRB [ms] Rc*1 0.32 0.36 0.41	2,94 3,80  RB [ms] Rc*2 0,38 0,41 0,46 0,51 0,64  SRB [ms] Rc*2 0,65 0,73 0,83 0,92 1,19	7.60  RB [ms] Rc *4  0.75  0.83  0.93  1.02  1.28  SRB [ms] Rc *4  1.30  1.45  1.66  1.84	15.20  RB [ms] Rc*8  1.50 1.65 1.85 2.03 2.56  SRB [ms] Rc*8  2.59 2.90 3.31 3.67



	A	В	l c l	<b>l</b> n l	F
1			CONTROL SUB-	FRAME OCCU	PANCY
2	***************************************				
3		1 CS occ. Rc * 1	1 CS occ. Rc * 2	1 CS occ. Rc * 4	1 CS occ. Rc * 8
4	1 CS occ. 1 * Rs	625.00		2500.00	5000.00
5	1 CS occ. 8/7 * Rs	645.71		2582.86	5165.71
	1 CS occ. 4/3 * Rs	673.33		2693.33	5386.67
	1 CS occ. 3/2 * Rs	697.50		2790.00	5580.00
	1 CS occ. 2 * Rs	770.00		3080.00	6160.00
9		7,000	13 10.00	5000.00	0100.00
10	***************************************				
11		1 CS %. Rc * 1	1 CS % Dc * 2	1 CS %. Rc * 4	1 CS % Rc * 8
	1 CS %.1* Rs	0.24		0.98	•
	1 CS %.8/7 * Rs	0.25	0.50		2.02
	1 CS %.4/3 * Rs	0.25	0.50	1.01	2.10
15	1 CS %.3/2 * Rs	0.20	0.53	1.09	2.10
15	1 CS %. 2 * Rs	0.27		1.09	2.18
	1 C5 70. 2 · K5	0.30	0.00	1,20	Z.41
17				······	
18	***************************************	1 CC [	1.00 [] 70 - # 2	1.00 [	1.001-12-12
19	1 CC [11 + D-	1 CS [ms] Rc * 1			1 CS [ms] Rc * 8
	1 CS [ms] 1 * Rs	0.08		0.31	
	1 CS [ms] 8/7 * Rs	0.08			
	1 CS [ms] 4/3 * Rs	0.08			0.66
	1 CS [ms] 3/2 * Rs	0.09			
24	1 CS [ms] 2 * Rs	0.09	0.19	0.38	0.75
25					
26					
27		CSF occ. Rc * 1	CSF occ. Rc * 2	CSF occ. Rc * 4	CSF occ. Rc * 8
28	CSF occ. 1 * Rs	2660.00	5160.00	10160.00	20160.00
29	CSF occ. 8/7 * Rs	2742.86	5325.71	10491.43	
30	CSF occ. 4/3 * Rs	2853.33	5546.67		
	CSF occ. 3/2 * Rs	2950.00			
	CSF occ. 2 * Rs	3240.00			
33				12.00.00	21000.00
34	***************************************				
35		CSF %.Rc*1	CSF % Rc * 2	CSF %. Rc * 4	CSF % Rc * 8
	CSF %. 1 * Rs	1.04		3.97	7.88
	CSF %. 8/7 * Rs	1.07	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		6
-	CSF %. 4/3 * Rs	1.11	2.08 2.17	4.10	8.13 8.48
	CSF %. 3/2 * Rs	1.15	2.17	4.42	8.78
	CSF %. 2 * Rs	1.13	``````````````````````````````````````		
	COL 70.4 KS	1.4/	2.47	4.88	9.69
41	***************************************				
42		COTIC	000 (- 3.0 + 6	0071	0000
43	CCD ( 3 4 4 P	CSF [ms] Rc * 1		CSF [ms] Rc * 4	CSF [ms] Rc * 8
-	CSF [ms] 1 * Rs	0.32	***************************************	1.24	2.46
	CSF [ms] 8/7 * Rs	0.33	0.65	1.28	2.54
	CSF[ms] 4/3 * Rs	0.35	``````````````````````````````````````	1.33	2.65
4	CSF[ms] 3/2 * Rs	0.36	<del>}~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</del>	1.38	2.74
48	CSF[ms] 2 * Rs	0.40	0.77	1.52	3.03
49				······································	
50			CSF-TABLE 1		
51	······································				
	4 control slots				
53	small data in eac	h control slot =	1 Elementary slot	= 16 bytes	
54	L control slot = p	reamble + CSB	+ 1 satellite head	er + small data	
	1 satellite header				
56	1  guard time = 40		***************************************	***************************************	······
57		·····	***************************************	***************************************	······
-	***************************************			······································	h

	_				_	_	
	A	В	L c	D	E	<u> </u>	G
1	Fade level	Ri(COS = 1)	RB+CSF (COS=1)	Ri (COS=2)	Rs (COS=1)	Stream SBF	
2	0	]	3492	<u>l</u>	<u> </u>	126254	126254
3	1	1.14	3629	<u>l</u>	1	126186	126186
4	2	1.14	3629	1.14	1	126186	126186
5	3	1.14	3629	1.14	1	126186	126186
6	4	1.33	3813	1.14	1	126094	126094
7	5	1.33	3813	1.33	1	126094	126094
8	6	1.5	3974	1.33	<u>_</u>	126013	126013
9	7	1.5	3974	1.5	<u>_</u>	126013	126013
10	8	<u>2</u> 3	4456	1.5	<u></u>	125772	125772
11	9	3	7788	2	2	186159	62053
12	10	<u> </u>	7788	3	2	186159	62053
13	11 12	4	8752 15416	3	2	185436	61812
14	13	6	15416 15416	4	4	180438	60146
15		6 8	15416	6	4	180438	60146
16	14		17344	6	4	178992	59664
17	15	12 12	30672 30672	8 12	8	168996	56332
18	<u>16</u>	8	30672 34538	å	8	168996	56332
19	17 18	16 16	34528 34528	12	<u>8</u> 8	166104	55368
20	10	10	34528	16	Δ	166104	55368
21	DP acres	tod for 10 d	otogram allagat				<b></b>
	The bit met	ted for 10 d	atagram allocati	ons.	4h o h i 4 m o 4	S of the DD	<b></b>
23	The bit rat	e used for a	ll the preambles	is driven by	the bit rai	e of the KB	·
24	The consider	the driving	bit rate is that o	ne or the CC	/S = 1.		<b></b>
25	The consid	erea inroug	hput for the stre	am requests	S IS 04KDIL/	S.	<b></b>
26		40		<b></b>		<b></b>	<b></b>
	guard time	40		<b> </b>		<b></b>	<b></b>
	shdr	144		<b></b>		<b>}</b>	<b>}</b>
	csb	128		<b></b>		ļ	<b></b>
	tr.put	2048		<b></b>	<b>{</b>	<b>{</b>	<b></b>
	preamble	352		<b></b>	<b></b>	<b>}</b>	<b>}</b>
32	4 03 43	4 43 43			<u></u>		<b></b>
	2712	pr. at 4Mbps		pr. at 1Mbps		Ri (COS=2)	<b></b>
34	2712 2712	3192 3192	4152	6072	00	<u> </u>	
_ 35		3192	4152	6072	ļ <u>†</u>	<u></u>	<b>}</b>
36	3019	3499 3499	4459 4450	6379	3	1.14	<b>}</b>
37	3019 3019	3499 3499	4459	6379	ş	1.14	<b>}</b>
38	3019 3435	3499 3915	4459 4875	6379	4	1.14	<b>3</b>
39	3435 3435	3915 3915	4875	6795		1.33	<b></b>
40	2000		4875 5248	6795	6	1.33	<b>{</b>
41	3808	4288	5248 5248	7168 7168	/ 	1.5	<b>}</b>
42	3808	4288 5384	5248 6344		8 9	1.5	<b>}</b>
43		5384 7576	6344 8536	8264		3	<b>{</b>
44	***************************************	7576	8536 8536	10456	10	*********************	<b>{</b>
45		7576	8536	10456	11	3	<b></b>
46	***************************************		10728	12648	12	4	<b></b> ,
47	***************************************		15112	17032	13	<u> </u>	<b></b>
48	***************************************		15112	17032	14	66	<b></b>
49				21416	15	8 12	<b></b>
50				30184	16	£	<b></b>
51				30184	17	12	<b></b>
52				38952	18	16	<b></b>
53	~~~~~~~~~~	<u></u>			ļ	ļ	<u></u>
54	(*) Inese co	oiums show	the bit occupancy	of a 64Kbit/	s stream al	location for	the various
CHANGE CONTRACTOR	K1 of the Co	US=2 when	all the preambles	must be sent	at bit rate 8	5,4,2,1 respe	ctively.
56				<b></b>		<u>}</u>	<b></b>
57			ST-TAB 1	ļ		<b>}</b>	<b></b>
- ~	;	,	•	,	•	,	•

1	l a l	I в I	l c l	l o l	l E	F	6
1	Fade level		RB+CSF (COS=1)		Rs (COS=1)	Stream SBF	DTG SBF
2	0	1	3492	1	1	126254	126254
3	1	1.14	3629	1	1	126186	126186
	2	1.14	3629	1.14	1	126186	126186
5	3	1.14	3629	1.14	} <del>-</del>	126186	126186
-	4	1.33	3813	$\frac{1.14}{1.14}$	ļ <u>1</u>		
6	5				ļ	126094	126094
	······································	1.33	3813	1.33	<u> </u>	126094	126094
8	<u>6</u>	1.5	3974	1.33	<u> </u>	126013	126013
9	<u> </u>	1.5	3974	1.5	1	126013	126013
10	8	2	4456	1.5	1	125772	125772
11	9	3	7788	2	2	186159	62053
12	10	3	7788	3	2	186159	62053
13	11	4	8752	3	2	185436	61812
14	12	6	15416	4	4	180438	60146
15	13	6	15416	6	4	180438	60146
16	14	8	17344	6	4	178992	59664
	15	12	30672	8	8	168996	56332
18	16	12	30672	12	8	168996	56332
19	17	16	34528	12	8	166104	55368
20	18	16	34528	16	8	166104	55368
21	·····						
_22	SRB comp	uted for 45 s	stream and 10 da	itagram allo	cations.		
23	The bit rat	e used for a	ll the preambles	is driven by	the bit rat	e of the RB	•
24	Therefore,	the driving	bit rate is that or	ne of the CC	$\overline{OS} = 1.$		<b>************</b>
			hput for the stre			S.	<del>}</del>
26					}	<b>************</b>	<del></del> ,
	guard time	40			<b></b>		<b></b>
20	shdr	144			<b></b>		<b></b>
_ 20	och	128			<b>}</b>	<b></b>	<b></b>
	csb		······································		<b>}</b>	<b></b>	<b></b> ,
	tr.put	512			<b></b>		<b></b>
_	preamble	352			<b></b>		<u></u>
32							
33		pr. at 4Mbps	pr. at 2Mbps	pr. at 1Mbps	Fade level	Ri (COS=2)	
34	1176	1656	2616	4536	0	1	
35	1176	1656	2616	4536	1	1	***************************************
36	1268	1748	2708	4628	2	1.14	<b>}</b>
37	1268	1748	2708	4628	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u> </u>
38	1268	1748	2708	4628	<u>3</u>	1.14 1.14	
39	1392	1872	2832	4752	5	1.33	<b></b>
-	1392	1872	2832	4752	6	1.33	<b></b>
40	1501				<u></u>		
41	1504	1984	2944	4864	<b></b>	1.5	<b></b>
42	1504	1984	2944	4864	8	1.5	
43		2312	3272	5192	9	2	·
44		2968	3928	5848	10	3	
45		2968	3928	5848	11	3	
46			4584	6504	12	4	
47			5896	7816	13	6	***************************************
48			5896	7816	14	6	<b>**********</b>
49	***************************************			9128	15	8	<b></b>
50	······································		······································	11752	16	12	<b>{</b>
51	***************************************	***************************************		11752	17	12	<b></b>
the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa			·····		18	$\frac{12}{16}$	<b>}</b>
52	***************************************			14376	<u></u>	10	<b></b>
_ 53	7%\\ 779\\		41 - 1-9		<b>5</b> ,	<u></u>	<u> </u>
5 A 1		work amili	the bit occupancy				
				***************************************			
55			all the preambles	must be sent	at bit rate 8	3,4,2,1 respe	ctively.
		OS=2 when a	all the preambles	must be sent	at bit rate 8	3,4,2,1 respe	ectively.
55		OS=2 when a		must be sent	at bit rate 8	3,4,2,1 respe	ctively.



		ā					
	A	<b>II</b> в	ll c	D	ll E	N F I	1 6
1	Fade level	Ri(COS = 1)	RB+CSF (COS=1)	Ri (COS=3)	Rs (COS=1)	Stream SBF	DTG SBF
2	0	1	3492	1	1	126254	126254
3	1	1.14	3629	1	1	126186	126186
4	2	1.14	3629	1	1	126186	126186
5	3	1.14	3629	1	1	126186	126186
6	4	1.33	3813	1.14	1	126094	126094
7	5	1.33	3813	1.14	1	126094	126094
8	6	1.5	3974	1.14	1	126013	126013
9	7	1.5	3974	1.33	1	126013	126013
10	8	2	4456	1.33	1	125772	125772
11	9	3	7788	1.5	2	186159	62053
12	10	3	7788	2.66	2	186159	62053
13	11	4	8752	2.66	2	185436	61812
14	12	6	15416	3	4	180438	60146
15	13	6	15416	5.33	4	180438	60146
16	14	8	17344	5.33	4	178992	59664
17	15	12	30672	6	8	168996	56332
18	16	12	30672	10.66	8	168996	56332
19	17	16	34528	10.66	8	166104	55368
20	18	16	34528	12	8	166104	55368
21						<b></b>	
22			***************************************	***************************************	***************************************	·····	***************************************
23	The bit rat	e used for a	ll the preambles	is driven by	the bit rat	e of the RB.	,
24	Therefore,	the driving	bit rate is that or	ne of the CC	$\mathbf{S} = \mathbf{I}$ .		······································
25	The consid	ered throug	hput for the stre	am requests	is 64Kbit/	s.	
26				•			***************************************
27	guard time	40					***************************************
_28	shdr	144			***************************************		***************************************
	csb	128					
	tr.put	2048					······································
31	preamble	352					***************************************
32	••••	i i					***************************************
33	pr. at 8Mbps	pr. at 4Mbps	pr. at 2Mbps	pr. at 1Mbps	Fade level	Ri (COS=3)	
_34	2712	3192	4152	6072	0	1	
_ 35	2712	3192	4152	6072	1	1	
36	2712	3192	4152	6072	2	1	
37	2712	3192	4152	6072	3	1	
38	3019	3499	4459	6379	4	1.14	
39	3019	3499	4459	6379	5	1.14	
40	3019	3499	4459	6379	<u>6</u>	1.14	
41	3435	3915	4875	6795	7	1.33 1.33	
42	3435	3915	4875	6795	8		
43		4288	5248	7168	9	1.5	
44		6831	7791	9711	10	2.66 2.66	
45		6831	7791	9711	11	2.66	
46			8536	10456	12	3	***************************************
47			13643	15563	13	5.33 5.33	
48			13643	15563	14	5.33	
49				17032	15	6	······
50		i -		27247	16	10.66	
_51				27247	17	10.66	
52				30184	18	12	
_53	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
54	(*) These co	olums show	the bit occupancy	of a 64Kbit/	s stream al	location for	he various
55	Ri of the CO	OS=3 when a	all the preambles	must be sent	at bit rate 8	3,4,2,1 respec	ctively.
56							
57			ST-TAB.2.		***************************************		
- ~ 1	3					}	



Fade level Ri(COS = 1) RB		I 0	<b>I</b> I 5	11 0		11 _	11	fi . 11
2	1	Fade level	D:(COS - 1)			DD. CCE	l F	( <del></del>
3			$\frac{1}{1} \frac{1}{1}$	2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
4   2		<u>\</u>	11/	2060	2000			
\$\frac{1}{6}\$ \ \frac{1}{4}\$ \ \ \text{1.33}\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		ļ <del></del>	·S	2002				
6 4 1.33 3264 2854 6118 6123 249882 7 5 1.33 3264 2854 6118 6123 249882 8 6 1.5 3616 2950 6566 6832 249168 9 7 1.5 3616 2950 6566 6832 249168 10 8 2 4672 3240 7912 8960 247040 11 9 3 7232 5740 12972 13664 242336 12 10 3 7232 5740 12972 13664 242336 13 11 4 9344 6320 15664 17920 238080 14 1 9 34 6320 15664 17920 238080 15 1 1 1 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<del></del>			2143			
7   5   1.33   3264   2854   6118   6123   249882   6   6   6   1.5   3616   2950   6566   6832   249168   9   7   1.5   3616   2950   6566   6832   249168   10   8   2   4672   3240   7912   8960   247040   11   9   3   7232   5740   12972   13664   242336   12   10   3   7232   5740   12972   13664   242336   13   11   4   9344   6320   15664   17920   238080   13   11   4   9344   6320   15664   17920   238080   14   15   16   17   18   19   18   19   19   19   19   19				2002	2/43			
8 6 1.5 3616 2950 6566 6832 249168 9 7 1.5 3616 2950 6566 6832 249168 10 8 2 4672 3240 7912 8960 247040 11 9 3 7232 5740 12972 13664 242336 12 10 3 7232 5740 12972 13664 242336 13 11 4 99344 6320 15664 17920 238080 14 1				3204	2834	*************************		
1.5				3204	2854			
10				3010				
11		<u>/</u>		3010		6566		
12		8	<u></u>		3240			
13	-		<u></u>		5740			
15			3					
15		11	4	9344	6320	15664	17920	238080
16					<b></b>	ļ		
17			<b></b>		<b></b>	<b>{</b>	ļ	
18			<b></b>		<b>§</b>	<b>}</b>	<b></b>	
19			<u></u>			<b></b>	Į	
20					<b></b>	<b></b>	Į	
21			<b></b>		<b></b>	ļ		ļ
22						<b>}</b>		
The bit rate used for all the preambles is driven by the bit rate of the RB.						<u></u>		
24 Therefore, the driving bit rate is that one of the COS = 1.  25 The considered throughput for the stream requests is 64Kbit/s.  26				***************************************		<u></u>		
25 The considered throughput for the stream requests is 64Kbit/s.  26	_ 23	The bit ra	ite used for a	ill the prear	nbles is drive	en by the bit	rate of the	RB.
26   27 guard time							<u></u>	
27 guard time		I ne consi	gereg throu	ghput for th	e stream rec	juests is 64K	bit/s.	
28   Shdr						<b></b>	<b></b>	
29   CSb					<b></b>	<b></b>		
30			B. A.	<b></b>	<b></b>	<b></b>		
31   preamble   352						ļ		
33   Fade level   Ri (COS=2)   pr. at 8Mbps   pr. at 4Mbps   Stream SBF   Datag. SBF				\$2222222222222222222222222222222222222	<b></b>	<b></b>	<b></b>	
33   Fade level   Ri (COS=2)   pr. at 8Mbps   pr. at 4Mbps   Stream SBF   Datag. SBF	-	preamble	352		<b>{</b>	ļ		
34         0         1         2712         3192         125390         125390           35         1         1         2712         3192         125198         125198           36         2         1.14         3019         3499         125198         125198           37         3         1.14         3019         3499         125198         125198           38         4         1.14         3019         3499         124941         124941           40         6         1.33         3435         3915         124941         124941           40         6         1.33         3435         3915         186876         62292           41         7         1.5         3808         4288         186876         62292           42         8         1.5         3808         4288         185280         61760           43         9         2         5384         181752         60584           44         10         3         7576         178560         59520           46         47         48         TABLE 1. COS2         49           50         51         52         53<	Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Section Sectio	D-1-1-1	D' (COC A)			<u></u>		
35         1         1         2712         3192         125198         125198           36         2         1.14         3019         3499         125198         125198           37         3         1.14         3019         3499         125198         125198           38         4         1.14         3019         3499         124941         124941           39         5         1.33         3435         3915         124941         124941           40         6         1.33         3435         3915         186876         62292           41         7         1.5         3808         4288         186876         62292           41         7         1.5         3808         4288         185280         61760           43         9         2         5384         181752         60584           44         10         3         7576         181752         60584           45         11         3         7576         178560         59520           49         50         51         52         53         54           51         52         53         54	-	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	RI (COS=2)					
36       2       1.14       3019       3499       125198       125198         37       3       1.14       3019       3499       125198       125198         38       4       1.14       3019       3499       124941       124941         39       5       1.33       3435       3915       124941       124941         40       6       1.33       3435       3915       186876       62292         41       7       1.5       3808       4288       186876       62292         42       8       1.5       3808       4288       185280       61760         43       9       2       5384       181752       60584         44       10       3       7576       181752       60584         45       11       3       7576       178560       59520         46       7       48       7576       178560       59520         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. <td>-</td> <td><u>U</u></td> <td><u>1</u></td> <td>**********************</td> <td>£</td> <td></td> <td></td> <td></td>	-	<u>U</u>	<u>1</u>	**********************	£			
37         3         1.14         3019         3499         125198         125198           38         4         1.14         3019         3499         124941         124941           39         5         1.33         3435         3915         124941         124941           40         6         1.33         3435         3915         186876         62292           41         7         1.5         3808         4288         186876         62292           42         8         1.5         3808         4288         185280         61760           43         9         2         5384         181752         60584           44         10         3         7576         181752         60584           45         11         3         7576         178560         59520           46         47         48         TABLE 1. COS2         49           50         51         52         53           53         54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.		<u>-</u>	<u>_</u>	<b>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</b>		·		
38         4         1.14         3019         3499         124941         124941           39         5         1.33         3435         3915         124941         124941           40         6         1.33         3435         3915         186876         62292           41         7         1.5         3808         4288         186876         62292           42         8         1.5         3808         4288         185280         61760           43         9         2         5384         181752         60584           44         10         3         7576         181752         60584           45         11         3         7576         178560         59520           46         47         48         TABLE 1. COS2         49           50         51         52         53           51         52         53           53         7576         178560         59520           55         Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	-		**************************************		<u> </u>	S		
39         5         1.33         3435         3915         124941         124941           40         6         1.33         3435         3915         186876         62292           41         7         1.5         3808         4288         186876         62292           42         8         1.5         3808         4288         185280         61760           43         9         2         5384         181752         60584           44         10         3         7576         181752         60584           45         11         3         7576         178560         59520           46         47         48         TABLE 1. COS2         49           50         51         50         51         52           53         54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55           51         6         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8         8	COOKEN COMMENTS	3						
40       6       1.33       3435       3915       186876       62292         41       7       1.5       3808       4288       186876       62292         42       8       1.5       3808       4288       185280       61760         43       9       2       5384       181752       60584         44       10       3       7576       181752       60584         45       11       3       7576       178560       59520         46       47       48       TABLE 1, COS2       49         50       51       50       51         51       52       53       54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various       55         Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	morning and a				\$************			
41       7       1.5       3808       4288       186876       62292         42       8       1.5       3808       4288       185280       61760         43       9       2       5384       181752       60584         44       10       3       7576       181752       60584         45       11       3       7576       178560       59520         46       47       48       TABLE 1. COS2       49         50       50       50       50         51       52       53       54         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	Section of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Par	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
42       8       1.5       3808       4288       185280       61760         43       9       2       5384       181752       60584         44       10       3       7576       181752       60584         45       11       3       7576       178560       59520         46       47       48       TABLE 1. COS2       49         50       51       50       51         51       52       53         53       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.         56       8	Contraction of the last							
43       9       2       5384       181752       60584         44       10       3       7576       181752       60584         45       11       3       7576       178560       59520         46       47       48       TABLE 1. COS2       49         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	a-continued in the							
44       10       3       7576       181752       60584         45       11       3       7576       178560       59520         46       47       48       TABLE 1. COS2       49         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.         56	-			2008				
45	-							
46 47 48 TABLE 1. COS2 49 50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	Terror Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contraction of the Contra	······	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		***************************************	**********************		
47 48 TABLE 1. COS2 49 50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	Commence of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Party of the Pa	11	3	······	/3/6	1/8260	39520	
TABLE 1. COS2  49  50  51  52  53  54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various Fig. 6 (*) These columns show the bit occupancy of a 64Kbit/s stream allocation for the various stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stream allocation stre	-					<b>}</b>	ş	
49 50 50 51 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.						<b>}</b>	Į	
50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	-		L A	ABLE I. CO	32	<b>{</b>	<u> </u>	
51   52   53   54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	Contract of the last of the la			······		<b>{</b>	<b>§</b>	
52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	-		······································	***************************************		<b>}</b>		
53	-		······································			<b>}</b>		
54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.  56	-					<b>}</b>		
55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.		/U.\ FF1				<u></u>	l	
56		(*) These c	colums show	the bit occu	pancy of a 64	Kbit/s strear	n allocation	for the various
		K1 of the C	OS=2 when	all the prean	nbles must be	sent at bit ra	ite 8 and 4	respectively.
_57						<b></b>		
	57					L	l	



Fade level Ri(COS = 1) RB	1	1 6	II 5	11 .	II .	n _	H	
1		H Fodo level	B:( COS = 1)	DD C	D D	I E	F CDD	<u>[                                    </u>
1		·····	$\frac{ \alpha (COS = 1)}{1}$		Z.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		.0	
4   2		<u></u>	111				4704	
6	3	<u></u>						
6	4	<u></u>						250395
7   5   1.33   3264   2854   6118   6123   249882	***************************************			2862				250395
6	6	4			2854			
1.5	7				2854			
10	8				2950			249168
10	9			3616	2950			249168
12	10		2				8960	247040
12	11	9	3	7232	5740	12972	13664	242336
13	12	10	3	7232	5740	12972		242336
14	-	11	4					238080
15			<u>}</u>	······································	<u> </u>	<b></b>	<u> </u>	
16		***************************************	<del>}</del>	<b></b>	<b></b>		<u> </u>	<u> </u>
17			<b>}</b>	<b></b>	<b>}</b>	·	<b>{</b>	<b></b>
18		••••••	<b>}</b>	<b>}</b>	<b>{</b>	<b>}</b>	<b>!</b>	<u></u>
19		•••••••••••••••••••••••••••••••••••••••	<b></b>	<b>{</b>	<b>{</b>	<b>}</b>	<b></b>	<b></b>
20			<b></b>	<b>§</b>	<b>§</b>	<b>}</b>	<b>}</b>	<b></b>
21			<b></b>	<b>{</b>	<b></b>	<b>{</b>	<b>}</b>	<b></b>
23   The bit rate used for all the preambles is driven by the bit rate of the RB.   24   Therefore, the driving bit rate is that one of the COS = 1.   25   The considered throughput for the stream requests is 16Kbit/s.   26   27   guard time				<b></b>	<b>&amp;</b>	<b></b>	<b></b>	<b></b>
The bit rate used for all the preambles is driven by the bit rate of the RB.				<b>}</b>	<b>}</b>	<u> </u>	<b></b>	
Therefore, the driving bit rate is that one of the COS = 1.		**************************************	<u> </u>	<b>{</b>	<b></b>	<u> </u>	<b></b>	
25 The considered throughput for the stream requests is 16Kbit/s.   26							rate of the	RB.
26								
28 shdr	25	The consid	dered throu	ghput for th	e stream red	uests is 16K	bit/s.	
28   shdr	26					}	1	
128	27	guard time	40	***************************************	***************************************	<b>*************</b>	<b>*******</b>	
128						<del></del>	<b>**********</b>	
30   tr.put   352   352   352   352   353   354   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   355   35				***************************************		<del></del>	<b>}</b>	
31   preamble   352   33   Fade levet   Ri (COS=2)   pr. at 8Mbps   pr. at 4Mbps   Stream SBF   Datag. SBF   34   0   1   1176   1656   125390   125390   35   1   1   1176   1656   125198   125198   125198   36   2   1.14   1268   1748   125198   125198   37   3   1.14   1268   1748   125198   125198   38   4   1.14   1268   1748   124941   124941   124941   39   5   1.33   1392   1872   124941   124941   124941   40   6   1.33   1392   1872   186876   62292   41   7   1.5   1504   1984   186876   62292   42   8   1.5   1504   1984   186876   62292   42   8   1.5   1504   1984   185280   61760   43   9   2   2312   181752   60584   44   10   3   2968   181752   60584   45   11   3   2968   178560   59520   46   47   48   TABLE 1.C. COS2   49   50   51   52   53   54   (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various   55   Ri of the COS=2   when all the preambles must be sent at bit rate 8   and 4 respectively.				***************************************		<b>}</b>	<b>}</b>	
32   33   Fade level   Ri (COS=2)   pr. at 8Mbps   pr. at 4Mbps   Stream SBF   Datag. SBF				***************************************	•••••••••••	<b>}</b>	<b>}</b>	
33   Fade level   Ri (COS=2)   pr. at 8Mbps   pr. at 4Mbps   Stream SBF   Datag. SBF		produitor	332	······		<b></b>	<b></b>	
34         0         1         1176         1656         125390         125390           35         1         1         1176         1656         125198         125198           36         2         1.14         1268         1748         125198         125198           37         3         1.14         1268         1748         125198         125198           38         4         1.14         1268         1748         124941         124941           40         6         1.33         1392         1872         124941         124941           40         6         1.33         1392         1872         186876         62292           41         7         1.5         1504         1984         186876         62292           42         8         1.5         1504         1984         185280         61760           43         9         2         2312         181752         60584           44         10         3         2968         181752         60584           45         11         3         2968         178560         59520           50         51         52 <td>and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of 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same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th</td> <td>Fodo lovol</td> <td>D: (COS_3)</td> <td>n= 04 03 /b= 0</td> <td></td> <td>C4 CDF</td> <td>D-4- CDE</td> <td></td>	and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same 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35         1         1         1176         1656         125198         125198           36         2         1.14         1268         1748         125198         125198           37         3         1.14         1268         1748         125198         125198           38         4         1.14         1268         1748         124941         124941           39         5         1.33         1392         1872         124941         124941           40         6         1.33         1392         1872         186876         62292           41         7         1.5         1504         1984         186876         62292           41         7         1.5         1504         1984         185280         61760           43         9         2         2312         181752         60584           44         10         3         2968         181752         60584           45         11         3         2968         178560         59520           46         47         48         TABLE I.C. COS2         49           50         51         52         53         54<		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1					
36         2         1.14         1268         1748         125198         125198           37         3         1.14         1268         1748         125198         125198           38         4         1.14         1268         1748         124941         124941           39         5         1.33         1392         1872         124941         124941           40         6         1.33         1392         1872         186876         62292           41         7         1.5         1504         1984         186876         62292           42         8         1.5         1504         1984         185280         61760           43         9         2         2312         181752         60584           44         10         3         2968         181752         60584           45         11         3         2968         178560         59520           46         47         48         TABLE L.C. COS2         49           50         51         52         53           53         54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various			1		******************	<del></del>	A	
37         3         1.14         1268         1748         125198         125198           38         4         1.14         1268         1748         124941         124941           39         5         1.33         1392         1872         124941         124941           40         6         1.33         1392         1872         186876         62292           41         7         1.5         1504         1984         186876         62292           42         8         1.5         1504         1984         185280         61760           43         9         2         2312         181752         60584           44         10         3         2968         181752         60584           45         11         3         2968         178560         59520           46         47         48         TABLE 1.C. COS2         49           50         51         52         53           53         54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various           55         Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.		<u>-</u>	1		***********			
39         5         1.33         1392         1872         124941         124941           40         6         1.33         1392         1872         186876         62292           41         7         1.5         1504         1984         186876         62292           42         8         1.5         1504         1984         185280         61760           43         9         2         2312         181752         60584           44         10         3         2968         181752         60584           45         11         3         2968         178560         59520           46         47         48         TABLE 1.C. COS2         49           50         51         52         53           51         52         53           54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various           55         Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.				******	*********	<u> </u>	P	
39         5         1.33         1392         1872         124941         124941           40         6         1.33         1392         1872         186876         62292           41         7         1.5         1504         1984         186876         62292           42         8         1.5         1504         1984         185280         61760           43         9         2         2312         181752         60584           44         10         3         2968         181752         60584           45         11         3         2968         178560         59520           46         47         48         TABLE 1.C. COS2         49           50         51         52         53           51         52         53           54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various           55         Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.		3	*************************************					
40       6       1.33       1392       1872       186876       62292         41       7       1.5       1504       1984       186876       62292         42       8       1.5       1504       1984       185280       61760         43       9       2       2312       181752       60584         44       10       3       2968       181752       60584         45       11       3       2968       178560       59520         46       47       48       TABLE 1.C. COS2       49         50       51       52       53         51       52       53       54         (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various       55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	Division and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the s	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
41       7       1.5       1504       1984       186876       62292         42       8       1.5       1504       1984       185280       61760         43       9       2       2312       181752       60584         44       10       3       2968       178560       59520         46       3       2968       178560       59520         47       48       TABLE 1.C. COS2       3         49       50       51       52         53       51       52         53       54       (*) These colums show the bit occupancy of a 64K bit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	39		1.33					
41       7       1.5       1504       1984       186876       62292         42       8       1.5       1504       1984       185280       61760         43       9       2       2312       181752       60584         44       10       3       2968       181752       60584         45       11       3       2968       178560       59520         46       47       48       TABLE 1.C. COS2       49         50       51       52       53       51         52       53       54       (*) These colums show the bit occupancy of a 64K bit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	40	6				186876	62292	
43       9       2       2312       181752       60584         44       10       3       2968       181752       60584         45       11       3       2968       178560       59520         46       47       48       TABLE 1.C. COS2       49         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	41	7	1.5					
43       9       2       2312       181752       60584         44       10       3       2968       181752       60584         45       11       3       2968       178560       59520         46       47       48       TABLE 1.C. COS2       49         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	42	8	1.5		1984			
44       10       3       2968       181752       60584         45       11       3       2968       178560       59520         46       47       48       TABLE 1.C. COS2       49         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55       Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	emeconiconstant.	9	2					<b></b>
45       11       3       2968       178560       59520         46       47       48       TABLE 1.C. COS2       49         50       51       52       53         53       54       (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various         55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.         56	-	10	3			181752		·····
46 47 48 TABLE 1.C. COS2 49 50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56		*******	3	::	**********			······································
47 48 TABLE 1.C. COS2 49 50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	ex-Michigan popular		······································			1		
TABLE 1,C. COS2  49  50  51  52  53  54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56			***************************************		***************************************	<b>}</b> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<b>§</b>	
49 50 50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various S5 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.	Chicago and Carlo		T A	RIETO	<u> </u>	<b>}</b>	<b></b>	<b></b>
50 51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	-		A /\			<b>}</b>	<b>!</b>	
51 52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	-					<b></b>	<b></b>	<b></b>
52 53 54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	-					<b>}</b>	§	
53						<b></b>	<b>!</b>	
54 (*) These colums show the bit occupancy of a 64Kbit/s stream allocation for the various 55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively. 56	CONTRACTOR CONTRACTOR CO.		***************************************			<b></b>	0000	
55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.  56	<u>53</u>							
55 Ri of the COS=2 when all the preambles must be sent at bit rate 8 and 4 respectively.  56		(*) These of	colums show	the bit occu	pancy of a 64	Kbit/s strear	n allocation	for the various
56	55	Ri of the C	OS=2 when	all the prean	nbles must be	sent at hit ra	ate 8 and 4	respectively.
$\sim$		······	***************************************					
	-	·····	***************************************	***************************************		<del></del>	<b></b>	<b></b>
		E	·	······	<b>2</b>		1	L

	l a	В	I с	ll D	ll E	l F	6 1
1		Ri(COS = 1)	RB	CSF	RB+CSF	SRB	Free space
2	0	1	2560	2660	5220	4704	250780
3	1	1.14	2862	2743	5605	5312	250395
4	2	1.14	2862	2743	5605	5312	250395
5	3	1.14	2862	2743	5605	5312	250395
6	4	1.33	3264	2854	6118	6123	249882
7	5	1.33	3264	2854	6118	6123	249882
8	6	1.5	3616	2950	6566	6832	249168
9	7	1.5	3616	2950	6566	6832	249168
10	8	2	4672	3240	7912	8960	247040
-	9	3	7232	5740	12972		247040
11	10	3	7232			13664	242336
_12		4		5740	12972	13664	242336
13	11	4	9344	6320	15664	17920	238080
14				<u></u>	<b></b>	<b></b>	<u> </u>
15				<u></u>	<u></u>		
1.6							
17						3	
18							
19				}	1	0000	
20				-		<del></del>	·····
21			***************************************	<b>}</b>	<b>{</b>	<del>g</del>	
22	***************************************		***************************************	<b>†</b>	<b>!</b>	<del></del>	······
	The bit ra	te used for a	II the prear	nbles is drive	en by the hit	rate of the	RR.
24	Therefore	, the driving	bit rate is	that one of th	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$		110.
25	The consider	dered throu	phnut for th	e stream rec	meete ie 64K	hit/s	
26			Supue ioi en	E Stream rec	10013 13 071	DIUS.	·····
	guard time	40		<b>}</b>	<b>}</b>	•	
	shdr	144	······································	<b></b>	<b>}</b>		
	csb	128		<b></b>	<b>}</b>		
The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa	·····	·······	······································	<b>{</b>	<b>}</b>		
	tr.put	2048	***************************************	<b></b>	<b>}</b>		
	preamble	352			<b>{</b>		
32			***************************************		<b>{</b>		
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Ri (COS=3)		pr. at 4Mbps		Datag. SBF	
34	0	1	2712	3192	125390	125390	
35	1	1	2712	3192	125198	125198	
36	2	1	2712	3192	125198	125198	
37	3	1	2712	3192	125198	125198	
38	4	1.14	3019	3499	124941	124941	
39	5	1.14	3019	3499	124941	124941	
40	6	1.14	3019	3499	186876	62292	<del> </del>
41	7	1.33	3435	3915	186876	62292	
42	8	1.33	3435	3915	185280	61760	······
43	9	1.5	······································	4288	181752	60584	<b></b>
44	10	2.66	***************************************	6831	181752	60584	<del> </del>
45	11	2.66	***************************************	6831	178560	59520	<b></b>
46	····	······}	***************************************		1,0000		······································
47	•••••••	······	***************************************		<b>}</b>		
48		<del></del>	BLE 1. CO	<u> </u>	<b>}</b>		<b></b>
-		A P		, LJ	<b>{</b>		
49					<b>{</b>		<b></b>
50	······	<u>.</u>	***************************************		<b></b>		
51	<u>-</u>				<b>}</b>		
52				***************************************	<b></b>		
_ 53	<u></u>	····	~~~~				
54	(*) These c	colums show	the bit occu	pancy of a 64	Kbit/s stream	n allocation	for the various
_ 55	Ri of the C	OS=3 when	all the prean	nbles must be	sent at bit ra	ite 8 and 4	respectively.
56							······
57							·····



	۱ ،	II B	II 6	11 5	11 -	11 -	11 . 11
1	Fade level	Ri(COS = 1)	RB	CSF	RB+CSF	SRB	G G
	)	$\frac{1}{1}$	2560	2660	5220	4704	Free space
2	<del>-</del>	1.14	2862	2743		. *	250780
3	2	1.14	2862	2743	5605	5312	250395
4	<u> </u>	1.14			5605	5312	250395
5		1.14	2862	2743	5605	5312	250395
6	4		3264	2854	6118	6123	249882
7	5	1.33	3264	2854	6118	6123	249882
8	6	1.5	3616	2950	6566	6832	249168
9		1.5	3616	2950	6566	6832	249168
10	8	2	4672	3240	7912	8960	247040
11	9	3	7232	5740	12972	13664	242336
12	10	3	7232	5740	12972	13664	242336
13	11	4	9344	6320	15664	17920	238080
14			<b>3</b>				
15						0	
16	************************	£				8	
17							
18							
19							
20							
21							
22						1	
23	The bit ra	te used for a	all the prear	nbles is drive	en by the bit	rate of the	è RB.
24	Therefore	, the driving	bit rate is	that one of th	$\frac{1}{1000} = 1$ .	T	}
25	The consi	dered throu	ghput for th	e stream rec	uests is 16K	bit/s.	<b></b>
26	***************************************				1	1	
27	guard time	40		<b>}</b>	<b>*************************************</b>	<b>†</b>	<b></b>
	shdr	144		<b>*</b>	<del> </del>	<b></b>	<b></b>
	csb	128		<del>}</del>	<b></b>	<b></b>	<u> </u>
	tr.put	512		<b>}</b>	<b></b>	<b></b>	
	preamble	352	***************************************	<u> </u>	<b>}</b>	<u> </u>	
32	L		~~~~~	<b>}</b>	<b></b>	<b></b>	<b></b>
	Fade level	Ri (COS=3)	nr. at 8Mhns	pr. at 4Mbps	Stream SBF	Datag. SBF	
34	0	1	1176	1656	125390	125390	
35	1	i i	1176	1656	125198	125198	
36	2	1	1176	1656	125198	125198	·····
37	3	1	1176	1656	125198	125198	<b></b>
38	4	1.14	1268	1748	124941	124941	<b></b>
39	5	1.14	1268	1748	124941	124941	<b></b>
40	6	1.14	1268	1748	186876	62292	<b></b>
41	7	1.33	1392	1872	186876	62292	<b></b>
42	8	1.33	1392	1872	185280	61760	<b></b>
43	9	1.5	1374	1984	181752	60584	<b></b>
	10	2.66		2745	181752	60584	<b></b>
44	11	2.66		2745			<b></b>
45	TT	۷,00	······	<u> </u>	178560	59520	<b></b>
46		••••••		<b></b>	<b>}</b>	<b>ļ</b>	<b></b>
47			DIETCO		<b></b>	<b> </b>	<b></b>
48		I A	BLE 1.C. C	<u> </u>	<b>}</b>	<b></b>	<b></b>
49				<b>}</b>	<b>}</b>	<b></b>	<b></b>
50				<b></b>	<b>}</b>	<b></b>	<b></b>
51		······		<b></b>	<b>}</b>	<b></b>	<b></b>
_52				<u>}</u>	<b></b>	<b></b>	<b></b>
53	Marin Marinian San			<u> </u>	<u></u>	L	
_54	(*) These (	colums show	the bit occu	pancy of a 16	Kbit/s strear	n allocation	for the various
	K1 of the C	20S=3 when	all the prean	nbles must be	sent at bit ra	ate 8 and 4	respectively.
56							
57							

.

	l a	В	ll c	ll n	II =	F	l 6 II	ı
1		Ri(COS = 1)		CSF	RB+CSF	SRB	Free space	<u> </u>
2	0	1	832	2660	3492	1952	252508	
3	1	1.14	887	2743	3630	2167	252370	
4	2	1.14	887	2743	3630	2167	252370	
5	<del>3</del>	1.14	887	2743	3630	2167	252370	
	4	1.33	960	2854	3814	2454	252186	
6	5	1.33	960	2854	3814	2454	252186 252186	
-7	6	1.5	1024	2950	3974	2434	252186 253296	
8	7	1.5	1024	2950 2950	3974 3974		253296 253296	
9	8	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1216	3240	4456	2704 3456	252544 252544	
1.0	9	3	2048	5740 5740				
	10	3	2048		7788	5408	250592	
12	************	\$*************************************	2	5740 6330	7788	5408	250592	
13	$\frac{11}{12}$	4	2432	6320	8752	6912	249088	
14	*****************	66	4096	11320	15416	10816	245184	
15	13	6	4096	11320	15416	10816	245184	•••••
_16	14	8	4864	12480	17344	13824	242176	
_17	15	12	8192	22480	30672	21632	234368	
18	16	12	8192	22480	30672	21632	234368	
_19	17	16	9728	24800	34528	27648	228352	
20	18	16	9728	24800	34528	27648	228352	*****
21	~~~~							
_ 22								
23	The bit ra	te used for a	all the prear	nbles is drive	en by the bit	rate of the	RB.	
24	Therefore	, the driving	g bit rate is t	that one of th	e COS = 1.			~~~~
25	The consi	dered throu	ghput for th	e stream req	uests is 64K	bit/s.		*****
26	RB compi	uted for 32 s	tream+10 d	atagram allo	cations			
27	guard time	40			<b>*************************************</b>	<b>*</b>		*******
28	shdr_	144		***************************************	<b>*************************************</b>	1	i	~~~~
29	csb	128	***************************************		<b>************</b>	<b>*************************************</b>		*****
30	tr.put	2048			<del>}</del>	<b></b>		*****
31	preamble	352	***************************************	***************************************	<del>}</del>	<b>8</b>	***************************************	
32	4		***************************************	~~~~~	<b>†</b>	İ		
33	Fade level	Ri (COS=2)	pr. at 2Mbps	pr. at 1Mbps	Stream SBF	Datag. SBF		******
34	0	1	4152	6072	126254	126254		
35	1						8	
36		1	3 4152	6072	126185	1 1761X5		
	2	1.14	4152 4459	6072 6379	126185 126185	126185 126185		
37	2	1.14 1.14	4459	6379	126185	126185		•••••
37		1.14	4459 4459	6379 6379	126185 126185	126185 126185		·······
38	3 4	1.14 1.14	4459 4459 4459	6379 6379 6379	126185 126185 126093	126185 126185 126093		······
38 39	3 4	1.14 1.14 1.33	4459 4459 4459 4875	6379 6379 6379 6795	126185 126185 126093 126093	126185 126185 126093 126093		
38 39 40	3 4	1.14 1.14 1.33 1.33	4459 4459 4459 4875	6379 6379 6379 6795 6795	126185 126185 126093 126093 126648	126185 126185 126093 126093 126648		
38 39 40 41	3 4 5 6 7	1.14 1.14 1.33 1.33	4459 4459 4459 4875 4875 5248	6379 6379 6379 6795 6795 7168	126185 126185 126093 126093 126648 126648	126185 126185 126093 126093 126648 126648		
38 39 40 41 42	3 4 5 6 7 8	1.14 1.14 1.33 1.33 1.5 1.5	4459 4459 4459 4875 4875 5248 5248	6379 6379 6379 6795 6795 7168 7168	126185 126185 126093 126093 126648 126648 126272	126185 126185 126093 126648 126648 126272		
38 39 40 41 42 43	3 4 5 6 7 8	1.14 1.14 1.33 1.33 1.5 1.5	4459 4459 4459 4875 4875 5248 5248 6344	6379 6379 6379 6795 6795 7168 7168 8264	126185 126185 126093 126093 126648 126648 126272 187944	126185 126185 126093 126093 126648 126648 126272 62648		
38 39 40 41 42 43	3 4 5 6 7 8 9	1.14 1.14 1.33 1.33 1.5 1.5 2	4459 4459 4459 4875 4875 5248 5248 6344 8536	6379 6379 6379 6795 6795 7168 7168 8264 10456	126185 126185 126093 126093 126648 126648 126272 187944 187944	126185 126185 126093 126093 126648 126648 126272 62648 62648		
38 39 40 41 42 43 44 45	3 4 5 6 7 8 9 10	1,14 1,14 1,33 1,33 1,5 1,5 2 2 3	4459 4459 4875 4875 5248 5248 6344 8536	6379 6379 6379 6795 6795 7168 7168 8264 10456	126185 126185 126093 126093 126648 126648 126272 187944 187944 186816	126185 126185 126093 126093 126648 126648 126272 62648 62648 62272		
38 39 40 41 42 43 44 45 46	3 4 5 6 7 8 9 10 11	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728	6379 6379 6379 6795 6795 7168 7168 8264 10456 10456	126185 126185 126093 126093 126648 126648 126272 187944 187944 186816	126185 126185 126093 126093 126648 126648 126272 62648 62648 62272 61296		
38 39 40 41 42 43 44 45 46 47	3 4 5 6 7 8 9 10 11 12	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 10456 12648	126185 126185 126093 126093 126648 126648 126272 187944 187944 186816 183888 183888	126185 126185 126093 126093 126648 126648 126272 62648 62648 62272 61296 61296		
38 39 40 41 42 43 44 45 46 47 48	3 4 5 6 7 8 9 10 11 12 13	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728	6379 6379 6379 6795 6795 7168 7168 8264 10456 10456 12648 17032	126185 126185 126093 126093 126648 126648 126272 187944 187944 188816 183888 183888	126185 126185 126093 126093 126648 126648 126272 62648 62648 62272 61296 61296 60544		
38 39 40 41 42 43 44 45 46 47 48 49	3 4 5 6 7 8 9 10 11 12 13 14	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 6	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416	126185 126185 126093 126093 126648 126648 126272 187944 187944 188816 183888 183888 181632	126185 126185 126093 126093 126648 126648 126272 62648 62272 61296 61296 60544 58592		
38 39 40 41 42 43 44 45 46 47 48 49 50	3 4 5 6 7 8 9 10 11 12 13 14 15	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 6	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184	126185 126185 126093 126093 126648 126648 126272 187944 187944 186816 183888 183888 181632 175776	126185 126185 126093 126093 126648 126648 126272 62648 62272 61296 61296 60544 58592 58592		
38 39 40 41 42 43 44 45 46 47 48 49 50 51	3 4 5 6 7 8 9 10 11 12 13 14 15 16	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 8 12 12	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184 30184	126185 126185 126093 126093 126648 126648 126272 187944 187944 186816 183888 183888 181632 175776 175776	126185 126185 126093 126093 126648 126648 126272 62648 62648 62272 61296 61296 60544 58592 58592 57088		
38 39 40 41 42 43 44 45 46 47 48 49 50 51	3 4 5 6 7 8 9 10 11 12 13 14 15	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 6	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184	126185 126185 126093 126093 126648 126648 126272 187944 187944 186816 183888 183888 181632 175776	126185 126185 126093 126093 126648 126648 126272 62648 62272 61296 61296 60544 58592 58592		
38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 6 8 12 12 12	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184 30184 38952	126185 126185 126093 126093 126648 126648 126272 187944 187944 18888 183888 181632 175776 175776 171264 171264	126185 126185 126093 126093 126648 126648 126272 62648 62648 62272 61296 61296 60544 58592 58592 57088 57088		
38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	1.14 1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 8 12 12 16 colums show	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184 30184 38952	126185 126185 126093 126093 126648 126648 126272 187944 187944 18888 181632 175776 175776 171264 171264 Kbit/s strean	126185 126185 126093 126093 126648 126648 126272 62648 62272 61296 61296 60544 58592 58592 57088 57088	for the various	
38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 6 8 12 12 16 colums show	4459 4459 4459 4875 4875 5248 5248 6344 8536 10728 15112 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184 30184 38952	126185 126185 126093 126093 126648 126648 126272 187944 187944 18888 181632 175776 175776 171264 171264 Kbit/s strean	126185 126185 126093 126093 126648 126648 126272 62648 62272 61296 61296 60544 58592 58592 57088 57088	for the various respectively.	
38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	1.14 1.33 1.33 1.5 1.5 2 3 3 4 6 6 6 8 12 12 16 colums show	4459 4459 4875 4875 5248 5248 6344 8536 8536 10728 15112 15112	6379 6379 6379 6795 6795 7168 7168 8264 10456 12648 17032 17032 21416 30184 30184 38952	126185 126185 126093 126093 126648 126648 126272 187944 187944 18888 181632 175776 175776 171264 171264 Kbit/s strean	126185 126185 126093 126093 126648 126648 126272 62648 62272 61296 61296 60544 58592 58592 57088 57088	for the various respectively.	

Fade level   Rit (COS = 1)   RB	1	۱ ،	ll 6	II ^	II 5	11 _	II _	II . I	li
2		Fada laval	B:(COS = 1)	C C	CCE	E E	F CDD	G G	<u></u>
1		**************************************	$\frac{KI(COS=1)}{1}$						ļ
1		<del>-</del>	1 1/						<b></b>
6		ļ <del>-</del>			2143				<b></b>
6		<u>Z</u>	A		£ 2143				<b></b>
The bit rate used for all the preambles is driven by the bit rate of the RB.   2					2/43			252370	ļ
8         6         1.5         1024         2950         3974         2704         253296           9         7         1.5         1024         2950         3974         2704         253296           10         8         2         1216         3240         4456         3456         252544           11         9         3         2048         5740         7788         5408         250592           12         10         3         2048         5740         7788         5408         250592           13         11         4         2432         6320         8752         6912         249088           14         12         6         4096         11320         15416         10816         245184           15         13         6         4096         11320         15416         10816         245184           16         14         8         4864         12480         17344         13824         242176           17         15         12         8192         22480         30672         21632         234368           18         16         12         8192         22480         30672 </td <td>6</td> <td></td> <td></td> <td></td> <td>2854</td> <td></td> <td>2454</td> <td>252186</td> <td><b></b></td>	6				2854		2454	252186	<b></b>
9	7						2454	252186	<b></b>
10					2950	3974	2704	253296	<b></b>
11		ļ <u>/</u>	1.5		2950		2704	253296	ļ
12		<u>8</u>	2			4456	3456	252544	<u></u>
13			3			7788	5408	250592	<u> </u>
13			3	2048				250592	<u></u>
14			4	2432				249088	
16	14		6					245184	
16	15		6			15416	10816	245184	
17	16				12480		13824	242176	
18	17	15	12	8192	22480	30672	21632	234368	******
19	18	16		8192	22480			234368	<b>*****</b>
20		17	16		24800		27648	228352	•
21		18			24800	34528	27648	228352	<b></b>
The bit rate used for all the preambles is driven by the bit rate of the RB.				······································	<u> </u>	<b></b>	1		<b></b>
The bit rate used for all the preambles is driven by the bit rate of the RB.  Therefore, the driving bit rate is that one of the COS = 1.  The considered throughput for the stream requests is 16Kbit/s.  RB computed for 32 stream+10 datagram allocations  guard time 40  as shdr 144  computed for 32 stream+10 datagram allocations  tr.put 512  and preamble 352  and preamble 362  and preamble		~~~~~		······	<b></b>	·}	<del> </del>	·····	<b> </b>
Therefore, the driving bit rate is that one of the COS = 1.     25   The considered throughput for the stream requests is 16Kbit/s.     26   RB computed for 32 stream+10 datagram allocations     27   guard time		The hit ra	te used for a	all the nrear	nhles is driv	en hy tha hi	trate of the	A PR	<b></b>
The considered throughput for the stream requests is 16Kbit/s,   26 RB computed for 32 stream+10 datagram allocations   27 guard time   40	24	Therefore	the driving	thit rata is	that one of the	$\frac{1}{10}$ COS = 1		: IXD.	<b></b>
26   RB computed for 32 stream+10 datagram allocations   27   guard time   40							hit/a	<u></u>	<b></b>
27 guard time	25	RR comp	ited for 32 s	troom : 10 d	otogram alla	luesis is 10r	LDIUS.	<b></b>	<b></b>
28 shdr         144           29 csb         128           30 tr.put         512           31 preamble         352           32         32           34 O         1 2616         4536         126254           35 1         1 2616         4536         126185         126185           36 2         1.14         2708         4628         126185         126185           37 3         1.14         2708         4628         126185         126093           39 5         1.33         2832         4752         126093         126093           40 6         1.33         2832         4752         126648         126648           41 7         1.5         2944         4864         126648         126648           42 8         1.5         2944         4864         126648         126648           41 7         1.5         2944         4864         126648         126648           41 10         3 3928         5848         187944         62648           45 11         3 3928         5848         186616         62272           46 12         4 4584         6504         183888         61296 <td>- 20</td> <td>guard time</td> <td>11eu 101 32 8</td> <td></td> <td>atagram and</td> <td>cations</td> <td><b></b></td> <td><b></b></td> <td>ļ</td>	- 20	guard time	11eu 101 32 8		atagram and	cations	<b></b>	<b></b>	ļ
128					<b></b>	<b></b>	<u> </u>	ļ	<b></b>
30   tr.put   352   31   preamble   352   32   33   Fade level   Ri (COS=2)   pr. at 2Mbps   pr. at 1Mbps   Stream SBF   Datag. SBF   34   0   1   2616   4536   126254   126254   126254   35   1   1   2616   4536   126185   126185   126185   36   2   1.14   2708   4628   126185   126185   37   3   1.14   2708   4628   126185   126185   38   4   1.14   2708   4628   126093   126093   39   5   1.33   2832   4752   126093   126093   40   6   1.33   2832   4752   126648   126648   41   7   1.5   2944   4864   126648   126648   42   8   1.5   2944   4864   126272   126272   43   9   2   3272   5192   187944   62648   44   10   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   45   11   3   3928   5848   187944   62648   47   13   6   5896   7816   183888   61296   48   14   6   5896   7816   183888   61296   48   14   6   5896   7816   183888   61296   48   14   6   5896   7816   181632   60544   49   15   8   9128   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   58592   50   16   12   11752   175776   18582   12   12   12   12   12   1					<b></b>	<b></b>	<b></b>	<b></b>	<b></b>
31 preamble   352   32   33   Fade level   Ri (COS=2)   pr. at 2Mbps   pr. at 1Mbps   Stream SBF   Datag. SBF   34   0   1   2616   4536   126254   126254   126254   35   1   1   2616   4536   126185   126185   126185   36   2   1.14   2708   4628   126185   126185   37   3   1.14   2708   4628   126185   126185   38   4   1.14   2708   4628   126093   126093   39   5   1.33   2832   4752   126093   126093   40   6   1.33   2832   4752   126648   126648   41   7   1.5   2944   4864   126648   126648   42   8   1.5   2944   4864   126272   126272   43   9   2   3272   5192   187944   62648   44   10   3   3928   5848   187944   62648   45   11   3   3928   5848   186816   62272   46   12   4   4584   6504   183888   61296   47   13   6   5896   7816   183888   61296   48   14   6   5896   7816   181632   60544   49   15   8   9128   175776   58592   50   16   12   11752   175776   58592							<b>}</b>		<b></b>
32   33   Fade level   Ri (COS=2)   pr. at 2Mbps   pr. at 1Mbps   Stream SBF   Datag. SBF   34   0   1   2616   4536   126254   126254   35   1   1   2616   4536   126185   126185   36   2   1.14   2708   4628   126185   126185   37   3   1.14   2708   4628   126185   126185   38   4   1.14   2708   4628   126093   126093   39   5   1.33   2832   4752   126093   126093   40   6   1.33   2832   4752   126648   126648   41   7   1.5   2944   4864   126648   126648   42   8   1.5   2944   4864   126272   126272   43   9   2   3272   5192   187944   62648   44   10   3   3928   5848   187944   62648   45   11   3   3928   5848   186816   62272   46   12   4   4584   6504   183888   61296   47   13   6   5896   7816   183888   61296   48   14   6   5896   7816   181632   60544   49   15   8   9128   175776   58592   50   16   12   11752   175776   58592						•••••••••••••••••••••••••••••••••••••••	<b></b>		<b></b>
33 Fade level         Ri (COS=2)         pr. at 2Mbps         pr. at 1Mbps         Stream SBF         Datag SBF           34 0 1         2616 4536 126254 126254         126254 126254           35 1 1 1 2616 4536 126185 126185         126185 126185           36 2 1.14 2708 4628 126185 126185         126185 126185           37 3 1.14 2708 4628 126185 126185         126185 126185           38 4 1.14 2708 4628 126093 126093         126093 126093           39 5 1.33 2832 4752 126093 126093         126093 126093           40 6 1.33 2832 4752 126648 126648         126648 126648           41 7 1.5 2944 4864 126648 126648         126648 126648           42 8 1.5 2944 4864 126272 126272         126272           43 9 2 3272 5192 187944 62648         187944 62648           44 10 3 3928 5848 187944 62648         187944 62648           45 11 3 3928 5848 186816 62272         13888 61296           47 13 6 5896 7816 183888 61296         181632 60544           48 14 6 5896 7816 181632 60544         181632 60544           49 15 8 9128 175776 58592         50 16 12 11752 175776 58592	Communicació-	preamble	352				<b></b>		<b></b>
34         0         1         2616         4536         126254         126254           35         1         1         2616         4536         126185         126185           36         2         1.14         2708         4628         126185         126185           37         3         1.14         2708         4628         126093         126093           38         4         1.14         2708         4628         126093         126093           39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296 <td></td> <td></td> <td></td> <td></td> <td></td> <td><b></b></td> <td></td> <td></td> <td><b></b></td>						<b></b>			<b></b>
35         1         1         2616         4536         126185         126185           36         2         1.14         2708         4628         126185         126185           37         3         1.14         2708         4628         126185         126185           38         4         1.14         2708         4628         126093         126093           39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         181632         60544 <td>4</td> <td>~~~~~~</td> <td>Ri (COS=2)</td> <td></td> <td></td> <td></td> <td>Datag. SBF</td> <td></td> <td>L</td>	4	~~~~~~	Ri (COS=2)				Datag. SBF		L
36         2         1.14         2708         4628         126185         126185           37         3         1.14         2708         4628         126185         126185           38         4         1.14         2708         4628         126093         126093           39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         181632         60544 <td>-</td> <td><u> </u></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-	<u> </u>	1						
37         3         1.14         2708         4628         126185         126185           38         4         1.14         2708         4628         126093         126093           39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         181632         60544           48         14         6         5896         7816         181632         60544		l	1		······				
38         4         1.14         2708         4628         126093         126093           39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50 <td>36</td> <td></td> <td></td> <td></td> <td></td> <td>126185</td> <td>126185</td> <td></td> <td></td>	36					126185	126185		
39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592	37	3	***************************************				126185		
39         5         1.33         2832         4752         126093         126093           40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592	38	4		*******************					
40         6         1.33         2832         4752         126648         126648           41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592	39	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					126093		
41         7         1.5         2944         4864         126648         126648           42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592	40	6	1.33	2832					
42         8         1.5         2944         4864         126272         126272           43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592								***************************************	
43         9         2         3272         5192         187944         62648           44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592		8							
44         10         3         3928         5848         187944         62648           45         11         3         3928         5848         186816         62272           46         12         4         4584         6504         183888         61296           47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592		9	2						
47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592	Brown Community of the		3					······	<b></b>
47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3						<b></b>
47         13         6         5896         7816         183888         61296           48         14         6         5896         7816         181632         60544           49         15         8         9128         175776         58592           50         16         12         11752         175776         58592			4					·····	<b> </b>
48     14     6     5896     7816     181632     60544       49     15     8     9128     175776     58592       50     16     12     11752     175776     58592								•••••••••••••••••••••••••••••••••••••••	<b></b>
49         15         8         9128         175776         58592           50         16         12         11752         175776         58592			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						<b> </b>
50 16 12 11752 175776 58592	-	S							<b> </b>
		·····	i						<b> </b>
.111 1/ 2 1/2 3 C 11/1/ 5 1/1/M/L 6 %/HXX 2	-			***************************************					<b></b>
	n-version and a second			······					
	essentimental property.	<u>10</u>	10	***************************************	143/0	1/1/04	2/088		<b></b>
53		/*\ TL		46 - 1-14		<u> </u>	L	l	<b></b>
54 (*) These columns show the bit occupancy of a 16Kbit/s stream allocation for the various	54	( ) I nese (	colums show	the bit occu	pancy of a 16	Kbit/s stream	n allocation	for the various	Ş
S5   Ri of the COS=2 when all the preambles must be sent at bit rate 2 and 1 respectively.	_55	KI OF the C	US=2 when	all the pream	notes must be	sent at bit r	ate 2 and 1	respectively.	
56 I ABLE 2.C.CUS2	56			IABLE 2.	CUS2	<b></b>	<b></b>		<b></b>
57	571					1	*		ŧ

:	1 -	<b>i</b> i _ !	ní -	11	li .	n	<b>.</b>	
***************************************	A D- I-I-I	B B	L C	D	L E	↓ F	<u>                                     </u>	<u> </u>
	······	Ri(COS = 1)	RB	CSF	RB+CSF	SRB	Free space	<b>!</b>
2	0	<u> </u>	832	2660	3492	1952	252508	<b></b>
3	1	1.14	887	2743	3630	2167	252370	<b></b>
4	2	1.14	887	2743	3630	2167	252370	<b></b>
5	3	1.14	887	2743	3630	2167	252370	<b></b>
6	4	1.33	960	2854	3814	2454	252186	<b></b>
7	5	1.33	960	2854	3814	2454	252186	<u> </u>
8	6	1.5	1024	2950	3974	2704	253296	<b></b>
9	7	1.5	1024	2950	3974	2704	253296	<u> </u>
10	8	2 3	1216	3240	4456	3456	252544	<u></u>
11	9	3	2048	5740	7788	5408	250592	<u> </u>
12	10	3	2048	5740	7788	5408	250592	<b>.</b>
13	11	4	2432	6320	8752	6912	249088	
14	12	6	4096	11320	15416	10816	245184	000
15	13	6	4096	11320	15416	10816	245184	
16	14	8	4864	12480	17344	13824	242176	8
17	15	12	8192	22480	30672	21632	234368	T
18	16	12	8192	22480	30672	21632	234368	T
19	17	16	9728	24800	34528	27648	228352	<b>*</b>
20	18	16	9728	24800	34528	27648	228352	<b>†</b>
21		<b>E</b>	***************************************	<b>*************************************</b>	<b>***********</b>	***************************************	<b>**************************</b>	<b>†</b>
22		<b>{</b>		<b></b>	<u> </u>	<b>†</b>	<del>}</del>	<b>†</b>
23	The bit ra	ite used for a	ill the prear	nbles is drive	en by the bit	rate of the	RR.	<b>†</b>
24	Therefore	, the driving	bit rate is t	hat one of th	e COS = 1		<u> </u>	<b>.</b>
25	The consi	dered throu	ghout for th	e stream red	mests is 16k	hit/s.	<del>{</del>	<b></b>
26	RB compi	uted for 32 s	tream+10 d	atagram allo	cations	1	<b></b>	<b> </b>
	guard time		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		}	\$	<u>}</u>	<b></b>
	shdr	144			<b>}</b>	·	<u> </u>	<b></b>
	csb	128	***************************************		<b></b>	<b></b>	}	<b></b>
Section 1	tr.put	512			<b> </b>	<b></b>	<b></b>	<b> </b>
	preamble	352		•••••	<b>}</b> ~~~~~	<b>}</b> ~~~~~	<b></b>	<b></b>
32	<u> </u>				<b></b>	<b></b>	<b></b>	<b>}</b>
Charles Commonwell	Fade level	Ri (COS=3)	pr. at 2Mbps	nr at 1Mhna	Stream SBF	Datas CDF	<b>{</b>	<b></b>
34	0	1	2616	4536	126254	Datag. SBF 126254	<b></b>	<b> </b>
35	1	1	2616 2616	4536	126185	126185		<b></b>
36	2	<del>-</del>	2616	4536	126185			<b></b>
	3	<del>-</del>	2616 2616			126185	<b></b>	<b></b>
37	4	1.14	2708	4536	126185 126093	126185		<b></b>
38	5	1.14	2708 2708	4628		126093		<b></b>
39	6	1.14	2708 2708	4628 4628	126093	126093		<b></b>
40	0	1.14	2708 2832	4628 4753	126648	126648		<b></b>
41	<u>/</u>	1.33	2832 2832	4752 4752	126648	126648		<b></b>
42	9		2832 2944	4752 4864	126272	126272		<b></b>
43		1.5		4864 5635	187944	62648		<b></b>
44	10	2.66	3705	5625 5625	187944	62648		<b></b>
45	11	2.66	3705	5625	186816	62272		<b></b>
46	12	3	3928	5848	183888	61296		
47	13	5.33	5456	7376	183888	61296		<b></b>
48	14	5.33	5456	7376	181632	60544		<b>.</b>
49	15	6		7816	175776	58592		<b></b>
50	16	10.66		10873	175776	58592		
51	17	10.66		10873	171264	57088		<u></u>
52	18	12		11752	171264	57088		
53	·····					0		
54	(*) These o	colums show	the bit occu	pancy of a 16	Kbit/s strear	n allocation	for the variou	S
_55	Ri of the C	OS=3 when	all the prean	nbles must be	sent at bit ra	ate 2 and 1	respectively.	
56			TABLE 2.0	C.COS3				I
57								

	1 .	<b>II</b> .	11	11	11	II.	21	
	A A	B B	<u>                                     </u>	<u>D</u>	<u> </u>	<u> </u>	<u>G</u>	<u> </u>
1	Fade level	Ri(COS = 1)		CSF	RB+CSF	SRB	Free space	<u> </u>
2	0	<u> </u>	832	2660	3492	1952	252508	<u></u>
3	ļ <u>1</u>	1.14	887	2743	3630	2167	252370	<b>.</b>
4	3	1.14	887	2743	3630	2167	252370	<b></b>
5		1.14	887	2743	3630	2167	252370	
6	4	1.33	960	2854	3814	2454	252186	<u> </u>
7	5	1.33	960	2854	3814	2454	252186	<u> </u>
8	6	1.5	1024	2950	3974	2704	253296	Š
9	7	1.5	1024	2950	3974	2704	253296	<u> </u>
10	8	<u>2</u> 3	1216	3240	4456	3456	252544	
11	9	3	2048	5740	7788	5408	250592	
12	10	3	2048	5740	7788	5408	250592	
13	11	4	2432	6320	8752	6912	249088	
14	12	6	4096	11320	15416	10816	245184	
15	13	6	4096	11320	15416	10816	245184	
16	14	8	4864	12480	17344	13824	242176	
17	15	12	8192	22480	30672	21632	234368	
18	16	12	8192	22480	30672	21632	234368	<b></b>
19	17	16	9728	24800	34528	27648	228352	<b></b>
20	18	16	9728	24800	34528	27648	228352 228352	
21					31320	27040	220332	
22	***************************************	***************************************		<b></b>	<b></b>	<b></b>		
	The hit ra	te used for s	ll the prear	nbles is drive	n by the hit	rote of the	DD	
24	Therefore	the driving	thit rate is	that one of th	$\frac{110}{1000}$	Tate of the	: ND.	
25	The consider	dered through	chnut for th	e stream req	$\frac{16 \text{ COS} = 1.}{16 \text{ Mosts is } 16 \text{ M}}$	hit/a		
25	RR compi	ited for 32 s	tream 101 d	atagram allo	cotions	LUILIS.		
27	guard time	40		atagram and	<u> </u>	<b>}</b>		
	shdr	144			<b>}</b>	<b> </b>		
29	ceh	128			<b></b>	<b></b>		
-	tr.put	2048	·······		<b></b>	ļ		
	preamble	352			<b></b>	<b> </b>		
32	picambic	334	·····		<b></b>	<b> </b>		
	Fade level	Ri (COS=3)	4 23 41		- CD - CD - CD - CD - CD - CD - CD - CD			
	)	KI (CUS=3)	pr. at 2Mbps 4152	pr. at 1Mbps	Stream SBF	Datag. SBF		
34	1	1		6072	126254	126254		
35	2	1	4152	6072	126185	126185		
36	3	<u>l</u>	4152	6072	126185	126185		
37	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1 1 7	4152	6072	126185	126185		
38	4	1.14	4459	6379	126093	126093		L
39	5	1.14	4459	6379	126093	126093		
40	6	1.14	4459	6379	126648	126648		
41	/	1.33	4875	6795	126648	126648		
42	8	1.33	4875	6795	126272	126272		
43	9	1.5	5248	7168	187944	62648		
44	10	2.66	7791	9711	187944	62648		
45	11	2.66	7791	9711	186816	62272		
46	12	3	8536	10456	183888	61296		
47	13	5.33	13643	15563	183888	61296	***************************************	
48	14	5.33	13643	15563	181632	60544		
49	15	6		17032	175776	58592		
50	16	10.66	***************************************	27247	175776	58592		
51	17	10.66	~~~~	27247	171264	57088		
52	18	12	***************************************	30184	171264	57088		
53	······	·····			11207			
54	(*) These o	colums show	the hit occur	nancy of a 16	Khit/c ctrace	n allocation	for the various	
	Ri of the C	OS=3 when	all the press	obles must be	cant of hit =	ii aiiUCdllOI	respectively.	S
56		3 -3 WIICII	TABLE 2.C	10103 111USL DE	sciii at UII Fa	aic 2 and 1	respectively.	
57			4. L. L. L. L. L. L. L. L. L. L. L. L. L.			<b></b>		
711	<u>£</u>				<u> </u>	<u> </u>		